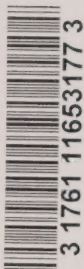


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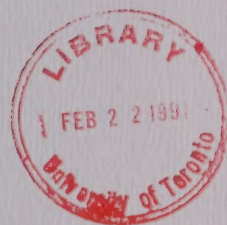
VOLUME: 290

DATE: Tuesday, February 12, 1991

BEFORE:

A. KOVEN Chairman

E. MARTEL Member



FOR HEARING UPDATES CALL (COLLECT CALLS ACCEPTED) (416)963-1249

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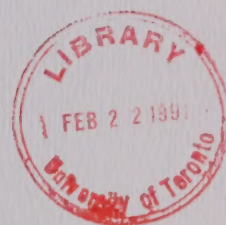
VOLUME: 290

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BEFORE:

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FOR HEARING UPDATES CALL (COLLECT CALLS ACCEPTED) (416) 963-1249

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HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL
RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR
TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental
Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental
Assessment for Timber Management on Crown
Lands in Ontario;

- and -

IN THE MATTER of a Notice by the Honourable
Jim Bradley, Minister of the Environment,
requiring the Environmental Assessment
Board to hold a hearing with respect to a
Class Environmental Assessment (No.
NR-AA-30) of an undertaking by the Ministry
of Natural Resources for the activity of
Timber Management on Crown Lands in
Ontario.

Hearing held at the offices of the Ontario
Highway Transport Board, Britannica Building,
151 Bloor Street West, 10th Floor, Toronto,
Ontario, on Tuesday, February 12th, 1991,
commencing at 10:30 a.m.

VOLUME 290

BEFORE:

MRS. ANNE KOVEN
MR. ELIE MARTEL

Chairman
Member



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I N D E X O F P R O C E E D I N G S

<u>Witness:</u>	<u>Page No.</u>
<u>ROBERT MULLER,</u> <u>PETER MORRISON</u> , Resumed	51730
Cross-Examination by Ms. Seaborn	51730
Cross-Examination by Mr. Freidin	51765

I N D E X O F E X H I B I T S

<u>Exhibit No.</u>	<u>Description</u>	<u>Page No.</u>
1707	Letter and one-page attachment from Mr. Cassidy re: area and volume in dispute at Marceau Lake.	51728
1708	75-page document entitled: Final Report of the Recommendations of the Advisory Committee on Resource-Dependent Communities in Northern Ontario dated May, 1986.	51729
1709	MNR Interrogatory Question No. 9(a) and (b) and response thereto re: FFT Panel No. 7.	51832

1 ---Upon commencing at 10:30 a.m.

2 MADAM CHAIR: Good morning.

3 Good morning, Dr. Muller, Dr. Morrison.

4 Good morning, Ms. Seaborn.

5 MS. SEABORN: Good morning, Madam Chair,
6 Mr. Martel.

7 MADAM CHAIR: Ms. Seaborn, we have
8 something to make an exhibit here. It's a letter dated
9 February the 11th from Mr. Cassidy with respect to an
10 undertaking given on October 23rd, 1990 regarding the
11 area and volume in dispute at Marceau Lake and it's a
12 letter and a one-page attachment, and this will be
13 Exhibit 1707.

14 ---EXHIBIT NO. 1707: Letter and one-page attachment
15 from Mr. Cassidy re: area and
16 volume in dispute at Marceau
 Lake.

17 MS. SWENARCHUK: Madam Chair, on that
18 subject, the paper that Dr. Morrison referred to last
19 week on the single industry towns issue has in fact not
20 been made an exhibit previously, so perhaps we can do
21 that now.

22 MADAM CHAIR: Just fine, mm-hmm.

23 MS. SWENARCHUK: It's entitled: Final
24 Report of the Recommendations of the Advisory Committee
25 on Resource-Dependent Communities in Northern Ontario.

1 It seems to be about 75 pages long.

2 MADAM CHAIR: What's the date on that?

3 MS. SWENARCHUK: May, 1986.

4 MADAM CHAIR: Did we have part of this --
5 did we have excerpts from this in exhibit before?

6 MS. SWENARCHUK: When I looked through my
7 exhibits list I didn't find any excerpts from it.

8 MADAM CHAIR: All right. Because it has
9 been mentioned at the hearing. All right, we'll give
10 that Exhibit No. 1708.

11 ---EXHIBIT NO. 1708: 75-page document entitled: Final
12 Report of the Recommendations of
13 the Advisory Committee on
Resource-Dependent Communities in
Northern Ontario dated May, 1986.

14 MADAM CHAIR: Ms. Seaborn?

15 MS. SWENARCHUK: They were referenced in
16 some of the Industry's material in Panel 2, that's
17 where it's been referred to before.

18 MADAM CHAIR: All right, fine. Thank
19 you.

20 MS. SEABORN: Madam Chair, you recall
21 last week that you asked me to respond to a letter from
22 Ms. Paton Lodge Lindsay. I have responded to her
23 correspondence and provided a copy to Mr. Pascoe and
24 all full-time parties, so that should be forthcoming
25 through your office shortly.

1 MADAM CHAIR: Yes, thank you. I saw that
2 this morning, Ms. Seaborn, and Mr. Pascoe is writing a
3 letter to her as well, and we will make that package an
4 exhibit when it's ready.

5 MS. SEABORN: Thank you.

6 ROBERT MULLER,
7 PETER MORRISON, Resumed

8 CROSS-EXAMINATION BY MS. SEABORN:

9 Q. Dr. Morrison, I would like to ask you
10 a few questions in relation to your direct testimony.
11 Could you have in front of you, please, your package of
12 overheads which is Exhibit 1696.

13 Do you have that?

14 DR. MORRISON: A. I do.

15 Q. And the first issue that you dealt
16 with in relation to timber management activities was
17 land allocation; is that correct?

18 A. That's right.

19 Q. And if you turn to page 3 of your
20 overheads we see Figure 3.2-1 which depicts the area of
21 the undertaking, and I believe you testified that all
22 of that area was allocated to timber management but, in
23 your view, there was no analysis as to whether that
24 allocation was appropriate?

25 A. That's correct.

1 Q. Now, would you agree with me that the
2 figure depicting the area of the undertaking merely
3 shows that portion of the province upon which timber
4 management may occur?

5 A. I would need to check the exact
6 boundaries but I believe that the boundaries also
7 correspond to the boundaries of forest management units
8 in Ontario.

9 Q. Well, would you agree that within
10 this area of the undertaking there are in fact
11 exclusions from timber management, for example, there
12 are private lands, there may be park lands, wilderness
13 areas?

14 A. I agree.

15 Q. And what this map shows is what I
16 call the outer limits within which timber management
17 may occur; is that correct?

18 A. Fine, true.

19 Q. Now, if we looked at a map showing
20 all the management units within the area of the
21 undertaking, we'd also see exclusions from the land
22 base as well; wouldn't we, within each forest
23 management unit?

24 A. I'm not sure if you'd see them in all
25 forest management units, but certainly in some of them

1 there would be exclusions.

2 Q. Well, if an exclusion existed, for
3 example a provincial park, that area would be mapped
4 out within a forest management unit; correct?

5 A. I'm not sure if parks actually fall
6 within forest management units or not, but...

7 Q. Okay. Assume we're just talking
8 about forest management units within Figure 3.2-1 the
9 area of the undertaking, any provincial parks that fall
10 within this figure would also fall within a forest
11 management unit; is that correct?

12 A. That's right.

13 Q. And when you were talking about land
14 allocation, I believe you said that we should first
15 assign a value to the land and then we should consider
16 all the values and compare alternatives based on net
17 social benefit or net present value; is that correct?

18 A. I would say net social benefit as
19 opposed to net present value.

20 Q. Okay. And would you in your proposal
21 make allowance for areas which are not currently used
22 for any timber management activities such as provincial
23 parks?

24 I mean, you'd take those out first, is
25 really my point, before you would start looking at the

1 value of the land?

2 A. Of course, because they've already
3 been committed, they've already been allocated by the
4 province for those purposes.

5 Q. Right. And after you took out the
6 exclusions, would you then undertake your analysis in
7 relation to what you call the extensive and intensive
8 margin?

9 A. That would be one way of approaching
10 the issue of allocating land to timber management or to
11 other uses.

12 Q. And is it your position that the
13 result could be that a forest management unit
14 boundaries as they are now depicted would change within
15 the area of the undertaking, or is it your position
16 that when you look at these values you look at them
17 solely within existing forest management unit
18 boundaries?

19 A. Well, if I understand your question
20 correctly, there is two issues there. One is the issue
21 of how land ought to be allocated to various uses in
22 the province and if you are allocating it within forest
23 management units to a variety of uses then you can
24 have -- you may well have some areas of a forest
25 management unit that are suitable for timber

1 management, other areas that are not suitable for
2 timber management, timber production.

3 There's a second issue which is the issue
4 of are the present boundaries of the forest management
5 units sensible in some sort of an economic sense, and I
6 don't feel I can comment on that at the moment.

7 My understanding is that those boundaries
8 have evolved over time and reflect administrative
9 convenience among other things.

10 Q. Well, if we go to page 2 of your
11 overheads where you had land allocation and the three
12 steps. All I want to understand is whether in your
13 proposal when you're talking about land allocation you
14 would take, as a given, the existing forest management
15 unit boundaries within the area of the undertaking or
16 whether you're suggesting that we take the area of the
17 undertaking, subtract what's been called the exclusions
18 such as provincial parks, and then assign values to the
19 land?

20 A. Well, I don't see those as being two
21 exclusive alternatives because you could assign values
22 to the land in each case and I guess I would argue that
23 you need to do that in both cases.

24 Q. No, I understand that there are two
25 different ways of doing it. I just want to be clear on

1 whether you are proposing to the Board that, in your
2 view, when we assign a value to the land then we should
3 not take into consideration existing forest management
4 unit boundaries, or whether you're suggesting that we
5 do the allocation within existing forest management
6 unit boundaries.

7 I just wasn't clear on what your
8 testimony was in this regard.

9 A. My testimony I believe was that you
10 should do the allocation within the forest management
11 units, you could also make some sort of -- you could
12 also do an analysis assessing whether the present
13 forest management unit boundaries were appropriate or
14 not using the same kind of analysis.

15 Q. Now, you referred the Board to the
16 Timber Management Planning Manual, page 11, in terms of
17 determination of allocation criteria.

18 A. Mm-hmm.

19 Q. Now, as I understand what you've just
20 told me, you don't have a difficulty then with
21 allocation criteria being applied within the boundaries
22 of existing forest management units?

23 A. No, that's correct.

24 Q. Okay. And is it fair to say that
25 your concern about the direction given in the Timber

1 Management Planning Manual was that you felt that there
2 should be more elaboration in determining how the
3 allocation factors are assessed; more direction towards
4 some sort of economic analysis in terms of determining
5 allocation criteria within a forest management unit?

6 A. That's correct.

7 Q. Now, at page 8 of your overheads you
8 dealt with the issue of access and proposed that prior
9 to determining access three questions should be
10 answered.

11 And the questions were -- you asked:
12 Does value of timber exceed private costs, does value
13 of timber exceed private and government costs, does
14 value of timber exceed social costs; is that correct?

15 A. That's right.

16 Q. And am I correct that it was your
17 evidence in relation to MNR's proposed road planning
18 documentation that it lacks economic analysis, in
19 particular, road subsidies are not considered.

20 Was that your concern with MNR's current
21 system?

22 A. Well, I have two main concerns with
23 the present system; one is that, to my knowledge, there
24 is no assessment of the value of the timber that is
25 being accessed so that it's not possible to do -- or,

1 to my knowledge, the comparison of the value versus the
2 cost is not being done.

3 And I'm sorry, the second -- and then the
4 other concern is the extent to which road subsidies
5 would bias the access decisions.

6 Q. Would you turn for a moment to FFT's
7 terms and conditions which is Exhibit 1610, page 30.

8 MR. COSMAN: Sorry?

9 MS. SEABORN: Page 30 of FFT's terms and
10 conditions, Exhibit 1610.

11 MADAM CHAIR: Was that page or a term and
12 condition number?

13 MS. SEABORN: Page 30, and it's the term
14 and condition to do with access planning, in particular
15 33(ii)(b) which starts halfway down page 30.

16 Q. Now, Dr. Morrison, if we look at term
17 and condition 33(ii)(b) there's reference to:

18 "Identification and analysis of
19 alternative corridors for primary roads
20 for the 10-year term and 500-metre wide
21 corridors for secondary roads for the
22 five-year term."

23 And then there's a list of detailed
24 analysis that should be undertaken in relation to each
25 alternative.

1 Now, I take it that this term and
2 condition is a summary of how you think access planning
3 should be undertaken in order to consider economic
4 factors; is that correct?

5 DR. MORRISON: A. Well, I didn't write
6 this term and condition and I perhaps would have worded
7 it differently, but it includes the major elements that
8 I think are important in doing access planning.

9 Q. And in the context of the timber
10 management activities that you listed on your first
11 page, you talked about allocating land first, then
12 developing access.

13 Would it be your understanding that this
14 analysis of corridors would take place after the
15 allocation issue had been determined within a forest
16 management unit?

17 A. It could be done after, or depending
18 on the approach that the analyst or the timber
19 management planning team or person took, it could be
20 done to some extent at the same time in that some of
21 those values; i.e. road costs, would influence how you
22 allocated the land.

23 Q. Then should I take it that when you
24 referred to the order in which you should look at the
25 timber management activities in Exhibit 1696 you

1 weren't necessarily saying that the allocation issue
2 should be dealt with before access?

3 I had taken it from your direct testimony
4 that it was your proposal to the Board that you deal
5 with these allocation issues whether or not an area is,
6 on economic terms, appropriate for timber management
7 activities and then you would move to road planning?

8 A. I think that in practice the planning
9 sequence would probably follow that route, but I would
10 just point out that you need to consider the costs in
11 those other activities, costs associated with
12 harvesting, costs associated with silviculture in
13 making your land allocation determinations.

14 You at least need to have a preliminary
15 assessment of what those benefits and costs would be
16 associated with those other activities to make an
17 appropriate land allocation.

18 Q. Would that require then a
19 determination within a forest management unit of which
20 areas should be set aside for intensive forestry and
21 which areas should be set aside for extensive forestry?

22 A. That would be part of the same
23 decision process, yes.

24 Q. Dr. Muller, would you turn to page 5
25 of your witness statement.

1 DR. MULLER: A. I have it.

2 MS. SWENARCHUK: Which part?

3 MS. SEABORN: Page 5, not the executive
4 summary.

5 Q. Section 2.1.3.

6 DR. MULLER: A. Yes.

7 MS. SEABORN: Q. You state that:

8 "Good timber management requires a clear
9 objective."

10 And then further down you state that:

11 "Dean Baskerville stressed that effective
12 management must compare actual
13 performance with measurable objectives."

14 And you would agree that measurable
15 objectives for both timber and non-timber values have
16 to be quantifiable?

17 A. Yes.

18 Q. And would you agree that we have to
19 develop cause/effect relationships in order to predict
20 our ability to attain these measurable objectives?

21 A. I agree that improving our
22 understanding of cause/effect relationships is very
23 important in improving our ability to manage according
24 to these objectives.

25 Q. And in the context of timber

1 management planning, you'd agree that objectives have
2 to be integrated into the planning process?

3 A. Yes.

4 Q. Would you support a reporting
5 structure that would state in advance of carrying out
6 the activities of access, harvest, renewal and
7 maintenance what these measurable objectives are?

8 A. Yes.

9 Q. And would you agree that monitoring
10 is necessary in order to determine the extent to which
11 you achieved your measurable objectives?

12 A. Definitely.

13 Q. Now, at page 114 of the witness
14 statement - I don't think it's necessary to go to it -
15 you made reference to the lack of bargaining power for
16 certain groups in society.

17 A. Yes.

18 Q. In your opinion, would a planning
19 system which included measurable objectives, the
20 development of cause/effect relationships, and a
21 monitoring system alleviate some of the concerns you
22 have in relation to a lack of bargaining power for
23 certain groups?

24 A. I have a little bit of difficulty
25 with that statement because it's not clear how the

1 objectives -- the measurable objectives have been set
2 and it may be the case that the objectives have been
3 set with the interests of the most visible groups in
4 mind and that they haven't been set with the interests
5 of the most diffuse or least powerful groups in mind.

6 Q. Assume for the purpose of my question
7 that the objectives have been set with input of groups
8 with the least bargaining power as well as the input of
9 the groups with the most bargaining power and their
10 input was treated equally for the purpose of setting
11 objectives in a plan.

12 A. I think that having such objectives
13 will certainly help -- certainly could help the
14 position of these more disadvantaged groups.

15 Q. You also explained in your testimony
16 that in the context of jobs we have to look at the
17 difference in earning when considering alternative uses
18 for labour, and I think you gave the example that if we
19 have a \$10 wage earner and he loses that job, his
20 alternative may be a \$5 an hour job and we should look
21 at the difference of \$5 not the loss of \$10.

22 A. That's correct.

23 Q. That's what you were explaining?

24 A. That's exactly the idea I'm trying
25 to --

1 Q. In a simple world.

2 A. In a simple world, yes.

3 Q. Okay. Would you agree that for some
4 stakeholders - and I'm thinking of those who have
5 traditionally had a lack of bargaining power - they may
6 not have that alternative; it may be an all or nothing
7 situation? I'll give you an example of that.

8 A. Please.

9 Q. Okay. Suppose we had a native
10 trapper and he works and lives on his trap line,
11 supports his family, has a trap line cabin and for
12 whatever reason - it could be as a result of timber
13 management activities or for other reasons - he loses
14 that trap line and he can no longer trap animals; isn't
15 that a situation where it may be unlikely that that
16 particular individual would have an alternative source
17 of income, if that's all they ever knew was trapping?

18 A. I think it's highly likely, yes.

19 Q. And if you had a number of trap lines
20 that were lost and the income from those trap lines
21 supported a community and a whole infrastructure that
22 goes with that community and you lost that sort of a
23 community, that would be an economic cost to the
24 province?

25 A. Well, roughly speaking the difference

1 in welfare or income to the community under its current
2 stable condition and whatever would happen to the
3 individuals in the event of the loss of the trap lines
4 would be a cost to the community.

5 Q. Would it be fair to say that those
6 individuals who lack bargaining power such as a trapper
7 are also often the same individuals who may have no
8 alternative in terms of alternative employment?

9 A. I think there are two almost
10 completely different groups who might lack bargaining
11 power; one group is certainly the native trapper of the
12 type you describe, the other is, to take an example,
13 the city dweller who is also a wilderness canoeist,
14 that individual has alternatives but does not have an
15 easily organized -- it's not easy to organize his or
16 her interests in a way which can be effective with this
17 kind of negotiation.

18 So I think that the lack of bargaining
19 power extends beyond the types of native groups that
20 you're referring to.

21 Q. In your hypothetical forest
22 management unit - and just to be clear we asked an
23 interrogatory on this - you didn't apply your analysis
24 to any existing timber management plan; did you?

25 A. That is correct.

1 Q. And in your hypothetical you
2 explained four different alternatives and if you have
3 clear measurable objectives would you agree with me
4 that on any one forest management unit an acceptable
5 way to proceed may be to combine any number of the
6 alternatives and the test as to how those alternatives
7 should be combined would be whether or not you're
8 achieving your objectives?

9 A. Yes, I think I agree with that.

10 Q. And considering the alternatives you
11 outlined for the Board, the best mix on any particular
12 forest management unit might be modified cutting
13 followed by natural regeneration and clearcutting
14 followed by artificial regeneration. Depending on what
15 your objectives were for that unit?

16 A. I'm sorry. Are you suggesting that
17 the best mix might be natural regeneration on some
18 portions of the forest management unit and large scale
19 clearcutting and artificial regeneration on other
20 portions?

21 Q. Yes. And whether or not that was
22 your management option choice would depend largely on
23 what objectives you had set for that management unit?

24 A. Well, yes, I would agree that such a
25 choice would depend on the management objectives. I

1 think it's important that we keep coming back to the
2 desirability of setting management objectives in a way
3 which ultimately maximizes the present value of net
4 social benefits flowing from the forest.

5 So I don't think it's sufficient simply
6 to say, for example: Well, our management objective is
7 to produce so many thousands of cubic metres of wood
8 regardless of an economic analysis and then say: Okay,
9 well, that determines the use of the forest management
10 unit.

11 Q. Well, assume for the purpose of my
12 question that we had in place clear measurable
13 objectives for both timber and non-timber values and we
14 were given a high level of comfort that the individuals
15 who lacked bargaining power had input into the setting
16 of those objectives, and if there was general agreement
17 within a forest management unit area as to what those
18 objectives should be for that piece of geography before
19 we set out on our timber management activities, it may
20 be that in terms of your hypothetical a mixture of the
21 alternatives would best achieve the objectives?

22 A. That's true.

23 Q. Now, in your analysis of the
24 hypothetical forest management unit you listed a number
25 of economic assumptions, and those are at page 5 of

1 Exhibit 1695C.

2 A. I have them.

3 Q. I just have a couple of questions of
4 clarification in relation to the purpose of setting out
5 these sorts of assumptions.

6 Am I correct that the rationale for
7 looking at the economic assumptions and the way you
8 have presented them is that one should consider the
9 cost of each activity regardless of who pays the costs
10 associated with the activity?

11 A. That's correct.

12 Q. And would it be fair to say that
13 there are going to be invariably policy choices that
14 have to be made, for example, how much is the
15 government prepared to contribute towards the cost of a
16 road or toward artificial regeneration; that's largely
17 a policy choice?

18 A. That is largely a policy choice...
19 Could you just explain to me what you mean by policy
20 choice. Are you saying that a policy choice is
21 something that we can't comment on because it's
22 determined outside of our terms of reference, it's a
23 political decision by the provincial government, for
24 example?

25 Q. Well, what I'm suggesting is that I

1 took your evidence to mean that when we look at
2 economic assumptions, in your view, the assumptions
3 should not build in to them the choices as to who pays
4 for silviculture activity or for roads, we should look
5 at those costs independent of those policy choices that
6 are made elsewhere. I'm not saying there may not be
7 input into how those policy choices are made at a
8 different level.

9 MADAM CHAIR: Excuse me. I thought that
10 Dr. Muller's assumption was that Industry should pay
11 those costs.

12 MS. SEABORN: Well, maybe Dr. Muller can
13 clarify his evidence then in that regard.

14 DR. MULLER: My evidence was intended to
15 say that in choosing the best use of the land from the
16 point of view of economics we should look at all the
17 benefits and all the costs of using the land,
18 regardless of who pays them and, in principle, that
19 means that it doesn't matter whether the Industry is
20 paying the road costs or the government is paying the
21 road costs, the highest valued use of the land should
22 be the same.

23 Now, it was also my testimony, I hope,
24 that when government decides for one reason or another
25 to assume certain costs, that may change the decisions

1 made by the Industry and I think it's a valid inference.
2 from my testimony that I would prefer to see the
3 Industry making its decisions based on paying all of
4 the costs and receiving all of the benefits of a
5 particular project.

6 In other words, I think that Industry
7 decisions will be better from a social point of view if
8 they fully take into account the complete costs of
9 building roads.

10 MS. SEABORN: Q. And are you also
11 saying, Dr. Muller, then that the policy choices as to
12 who should pay for roads or how much should be made
13 with the full knowledge of what the costs are
14 associated with conducting timber management?

15 You're saying the Industry should know
16 what those costs are. Were you also saying as well
17 that the government should know what you quote as being
18 the real costs are associated with timber management
19 before it makes the policy choices in terms of
20 silviculture subsidies or road subsidies?

21 A. I want to be careful here. I think
22 that the government could adopt several different
23 policies concerning the management of timber. For
24 example, the government could say that it wanted
25 private companies to do virtually all of the

1 management, then it would be important to make sure
2 that the private incentives used or the private
3 incentives which govern Industry action fully reflected
4 social costs and benefits of each of their activities,
5 and under those circumstances I would think that the
6 Industry -- you would want to make sure, I think you
7 would want to make sure that the Industry paid the full
8 cost of the roads.

9 Alternatively you might want to say that
10 there are some actions which are done by the
11 government, and I would like then the government agency
12 involved to make sure it's making its decision based on
13 as full an assessment as possible of all of the costs
14 and all the benefits.

15 Does that answer your question?

16 Q. Now, just stopping you there. I
17 guess what I was getting at in a round-about-way, is
18 that I take it what you're saying to the Board is that
19 when we set out our economic assumptions the way you've
20 done in your hypothetical analysis that those should be
21 done regardless of what the government decides to do in
22 terms of what I call these policy choices as to how
23 they go about funding or not funding timber management
24 activities; you should be presenting the true costs?

25 A. Yes. I think it's very important for

1 both ground level management and for public discussion
2 to know the true costs and benefits of any particular
3 management alternative that's adopted, and so I agree
4 with what you're saying.

5 MADAM CHAIR: Dr. Muller, is your
6 evidence that you haven't reviewed the development of
7 the FMA system in Ontario? When you're looking at your
8 economic analysis, you didn't revisit the reasons why
9 the system is set up as it is?

10 DR. MULLER: Not explicitly, no, I did
11 not.

12 MR. FREIDIN: Madam Chair, I'm not sure
13 whether you said FMU or FMA.

14 MADAM CHAIR: The FMA system.

15 MR. FREIDIN: All right, thank you.

16 MS. SEABORN: You anticipated my next
17 question.

18 Q. Dr. Morrison, we dealt with this --
19 touched on this issue earlier. Is it your position
20 that land within a forest management unit should be
21 allocated to either extensive or intensive silviculture
22 based on ecological sustainability or present net
23 worth?

24 DR. MORRISON: A. Well, I would take the
25 position that land ought to be allocated to intensive

1 or extensive silviculture based on an objective of
2 maximizing net social benefit or -- and one way of
3 measuring part of that is by measuring net present
4 value.

5 And I would also take the position that
6 you ought to have as a constraint ecological
7 sustainability because what that does is it
8 incorporates another important set of considerations
9 which we have only very poorly begun to value.

10 As I believe my colleague pointed out
11 last week, if we had perfect information about the
12 value that people attach to ecological sustainability
13 and the possible consequences of not having sustainable
14 timber management or forest management practices, then
15 we could operate simply on the basis of maximizing net
16 social benefit, but in the absence of that detailed
17 understanding, I believe that that's a reasonable
18 constraint.

19 Q. And so the results of your net social
20 benefit analysis may have to change at the five-year
21 planning stage based on a constraint of ecological
22 sustainability. Is that a fair summary?

23 A. I'm not clear why you would think
24 that would change. Are you thinking in terms of
25 additional information becoming available?

1 Q. I'm suggesting that if you do your
2 net social benefit analysis and you come up with a
3 particular mixture as to what should happen on a forest
4 management unit, you then may look at factors of what I
5 believe Forests for Tomorrow has outlined in its
6 silvicultural terms and conditions, and implementing
7 those constraints on the geographic land base may end
8 up changing how you proceed on a particular area, you
9 may not end up doing what you thought you were going to
10 do based on your net social benefit analysis?

11 A. Which silvicultural terms and
12 conditions?

13 Q. Let me try and simplify it. I think
14 what I'm suggesting is that because of ecological
15 constraints you may not proceed on a particular forest
16 management unit in the way you thought you were going
17 to proceed, your ecological factors may change your
18 plan?

19 A. I agree.

20 Q. Okay. And is it your understanding
21 of how the system would work is that the net social
22 benefit analysis is contemplated to be done before you
23 bring in the factors of ecological sustainability as a
24 constraint, or do you look at ecological sustainability
25 first when you're setting your ground rules and then do

1 your net social benefit analysis?

2 A. Well, ideally you'd want to bring
3 them in at the same time.

4 Q. Okay. So those are two things that
5 you would have to do at the outset of every planning
6 process for every forest management unit for every
7 five-year term?

8 A. You may apply that kind of
9 decision-making over a shorter time period as well. I
10 guess I would argue that that also ought to be done on
11 an operational basis, taking both those ecological
12 constraints and concerns into account as well as the
13 analysis of the net social benefit.

14 Q. Well, your allocation of intensive
15 and extensive areas is currently done at the five-year
16 planning area level, as is the setting of your
17 silvicultural ground rules.

18 A. Right.

19 Q. And so you would have to, even under
20 the current system, set out a map of what you're going
21 to do over the next five years at the five-year stage
22 anyway?

23 A. Agreed.

24 Q. Dr. Muller, clearly one message that
25 you want to leave with the Board, as I understand, is

1 that in timber management planning we need to identify
2 by some method the social costs and benefits of
3 alternatives.

4 DR. MULLER: A. That's true.

5 Q. And a systematic methodology, in your
6 view, should be put in place to incorporate social
7 costs and benefits?

8 A. That's correct.

9 Q. And is it fair to say that the
10 usefulness or importance of identifying social costs
11 and benefits is not dependent on the particular
12 methodology that may be adopted?

13 A. Do you mean particular methodology
14 for measuring costs and benefits?

15 Q. That's right. The usefulness of
16 identifying social costs and benefits is a useful
17 exercise in itself, regardless of the methodology that
18 may be adopted?

19 A. Yes.

20 Q. And assuming there's general
21 agreement that economic information should be used in
22 an analysis of the advantages and disadvantages of one
23 set of choices with respect to conducting timber
24 management, would you agree that professionals may
25 differ on the best way to incorporate economic

1 information into the decision-making process?

2 A. Yes.

3 Q. Would you agree, Dr. Muller, that
4 cost/benefit analyses that incorporate methodologies
5 such as willingness to pay should not be seen as a
6 replacement for public consultation with the people who
7 are directly affected by timber management activities?

8 A. I think that they should not be
9 viewed as a replacement, I think they should be viewed
10 as an important complement.

11 I also would like to stress that I think
12 it's important to start, even with simple easily
13 measured costs and benefits excluding the willingness
14 to pay business. I think it's -- I think the point to
15 start at is to make sure that you've got financial
16 information about the directly measured costs and
17 benefits of the timber use and then proceed from there.

18 Q. Would you agree that a public
19 consultation program that effectively translates the
20 objectives and concerns of the public who live in a
21 particular area into explicit decisions may provide a
22 more accurate reflection of public priorities for that
23 area than such surveys as willingness to pay?

24 A. I don't think I would agree with that
25 statement. I think that there are really important

1 difficulties with the public participation process
2 associated with the public goods nature of the
3 commodity as I referred to. So I think it's -- I think
4 it's very important that public participation be
5 supplemented with attempts to learn by surveying needs
6 about the value that people place on various
7 activities.

8 It might be possible to design those
9 surveys in such a way that you separate the interests
10 of the immediate residents and the interests of the
11 more distant residents.

12 Q. Well, Dr. Muller, one of the
13 traditional cornerstones of environmental assessment
14 has always been the importance of public participation
15 in the development of alternatives, and what I'm
16 suggesting is that if you have in place a public
17 consultation program that is truly meaningful and truly
18 sets objectives for both timber and non-timber values,
19 would you agree that you may get a more accurate
20 reflection of what the public in a particular area
21 wants to see happen on a forest management unit than
22 you would through surveys such as a willingness to pay
23 survey?

24 A. No, I'm afraid I can't agree with
25 that. I really think that there are costs associated

1 with participating in public meetings, very important
2 costs associated with the perception that no matter
3 what you say nothing is going to happen, that the
4 decision will be made by other people anyway.

5 Those difficulties I think are inherent
6 in the public participation process. I'm not saying
7 that we should not have public participation processes,
8 but I think we should be skeptical of their ability to
9 capture most accurately the desires of the population.

10 MR. MARTEL: Can I ask you a
11 hypothetical. You've got a problem with a tonne of
12 garbage and they don't know where to put it. When a
13 determination is made, should the residents of northern
14 Ontario have as much say by indication of willingness
15 to pay where that garbage will be located as is the
16 case if we did it in reverse with timber management.

17 I guess I'm asking you, do you do these
18 type of surveys on all issues or do you become
19 selective in the ones that you choose?

20 Because I'm sure you can see what I'm
21 driving at here. I think what Ms. Seaborn is driving
22 at, that people who are directly affected have more at
23 stake in the final outcome than the people who, as you
24 said - and I think the one you used last week, they
25 might never go and see the forest but they're happy

1 it's there - and so the people who are in the north
2 have more of a concern about what's going to come out
3 of a hearing such as this, they have more at stake than
4 somebody in Toronto; conversely somebody in Toronto --
5 the question is how much weight you give to their
6 position as opposed to, let's say, to garbage and
7 people wanting to ship it north.

8 Would you give that the same sort of
9 weight in terms of your making a final decision where
10 you get rid of the garbage? And how much influence
11 should the people across that massive area called
12 northern Ontario have in that decision?

13 DR. MULLER: Well, I think you're
14 confusing distributional and allocational issues in
15 this discussion.

16 MR. MARTEL: Okay.

17 DR. MULLER: I think from the point of
18 view of distribution; that is, from the point of view
19 of making sure that nobody gets an excessively raw
20 deal, it's likely to be true that northern
21 communities -- residents of northern communities have
22 more at stake in these issues; that is to say, a larger
23 fraction of their income is up for grabs so to speak
24 and, consequently, the need to make sure that we are
25 fair in our distribution of the economic pie to these

1 people becomes very important, and I think that is part
2 of what this set of questions is concerned with.

3 And my answer there is simply that I
4 think that you might investigate the use of contingent
5 valuation methods directed at establishing exactly how
6 northerners feel or local residents feel about
7 particular issues to supplement what you learn from
8 public participation; that is, I'm not -- my comments
9 were directed at reservations about the effectiveness
10 of public participation fully revealing what people
11 want and I think other techniques might be useful
12 supplements.

13 In terms of deciding whether you're going
14 to dump the garbage or whether you are going to follow
15 a particular management scheme, you might reasonably be
16 interested in maximizing the size of the economic pie
17 on the assumption that you're going to look after the
18 distributional problems and then the particular
19 location of the person is irrelevant if the total
20 willingness to pay for forest management or garbage
21 management of a particular type exceeds the costs, why
22 then, it should be done.

23 MADAM CHAIR: Dr. Muller, is your basic
24 assumption that every citizen of Ontario has an equal
25 size stake in timber management regardless of where

1 they live?

2 DR. MULLER: Well, as an expert economic
3 witness I can't take too much -- too firm a position on
4 that because the idea of a stake is not an idea that is
5 common in the economic analysis of this kind of
6 situation.

7 I've tried in my testimony to try to come
8 to grips with what I think is meant by stakeholders and
9 so forth and I think that I just refer back to what I
10 said a minute or two ago.

11 I think that the consequences of a
12 particular decision may be more dramatic for some
13 individuals than others and a fair government, a
14 government concerned with distribution, will take that
15 into account and try to make sure that no one suffers
16 unduly from a -- you don't want to have a situation in
17 which there's a small public benefit to everybody and
18 the costs are all borne by a small group of
19 individuals. That would be patently unfair.

20 So in the sense that there must be people
21 who are more dramatically affected by decisions than
22 others, I would completely agree. On the other hand,
23 when you're trying to decide which way should we go in
24 order to maximize the size of the economic pie, what
25 counts is the total value of benefits all put together

1 minus the total value of the costs all put together,
2 and for that particular decision I think we should
3 weigh everybody equally.

4 I'm afraid that may sound like weasling.
5 I don't think that you should say, for example, that
6 just because a particular forest management decision
7 might have highly negative consequences on one
8 particular community it should not be undertaken; I
9 don't think that community should have a veto power.

10 I think we should make very sure that we
11 treat the community fairly, but I think it's implicit
12 in the way in which we do business throughout the
13 province that when matters of public policy are -- when
14 it's required for an important public policy goal we
15 expropriate private property and we make decisions that
16 may negatively affect individuals and we try to make
17 sure we provide fair compensation for them, whether
18 we're talking about forest management in northern
19 Ontario or expropriating property for an expressway.

20 DR. MORRISON: Perhaps I could just
21 comment on that and then come back to a point in Ms.
22 Seaborn's question.

23 We in fact do routinely make that kind of
24 compensation to small communities that, for example,
25 take dumps within or near their city limits. There are

1 economic benefits in a variety of forms that are
2 transferred to those communities to alleviate the kinds
3 of unfairness that are associated with having a garbage
4 dump that has Toronto's garbage in it.

5 MS. SEABORN: Q. Well, just stopping you
6 there, Dr. Morrison, would it be fair to say that often
7 those sorts of agreements are worked out between the
8 government and the particular community affected in
9 terms of the actual terms of those agreements, so you
10 could translate that same theory to the north, the
11 importance is that you are consulting directly with the
12 people affected not with some people at the other side
13 of the province in terms of a survey?

14 DR. MORRISON: A. That's correct.

15 Q. Okay.

16 A. And just going back to a point in
17 your question to Dr. Muller, you asked about the role
18 of public participation, and I think that public
19 participation does have a potentially important role in
20 the framing of alternatives to timber management and
21 this is where a discussion about what kinds of values,
22 what kinds of activities could potentially go on in
23 that forest management unit may come out.

24 Q. Well, I think to be fair, Dr. Muller,
25 you did say that it was not your evidence that survey

1 methods or even cost/benefit analysis should replace
2 public consultation in the formulation of alternatives
3 for timber management plans?

4 DR. MULLER: A. That's true. I believe
5 that public participation should continue.

6 MS. SEABORN: I think on that note, Madam
7 Chair, those are all my questions. Thank you.

8 MADAM CHAIR: Thank you very much, Ms.
9 Seaborn.

10 Mr. Freidin?

11 MR. FREIDIN: Could I please have a
12 five-minute break?

13 MADAM CHAIR: Sure.

14 Do we have to leave the room, or are you
15 just going to shuffle your papers around?

16 MR. FREIDIN: Well, I would like to leave
17 the room.

18 MS. SEABORN: I was exactly an hour, Mr.
19 Freidin.

20 MR. MARTEL: Can you match that?

21 MR. FREIDIN: I may surprise you.

22 ---Recess at 11:30 a.m.

23 ---On resuming at 11:40 a.m.

24 MADAM CHAIR: Please be seated.

25 MR. FREIDIN: Madam Chair, Ms. Swenarchuk

1 has graciously offered to buy me lunch at the soon to
2 close Courtyard Cafe if I finish today. I don't know
3 if that would be possible, but I'm sure going to try to
4 win the bet.

5 My support don't think I'm going to do
6 that, but Mr. Bisschop is here and I like to prove Mr.
7 Bisschop wrong as much as possible, so I'm going to
8 try.

9 CROSS-EXAMINATION BY MR. FREIDIN:

10 Q. Dr. Muller, is it fair to conclude
11 that net social benefit, net present value calculations
12 is not intended by you to be the sole decision-making
13 criteria when you're making resource management
14 decision?

15 DR. MULLER: A. Yes.

16 Q. That in fact you have to consider a
17 number of --

18 MR. MARTEL: Now, wait. Is that yes it
19 is, or yes it's not?

20 DR. MULLER: Well, I thought Mr. Freidin
21 asked me whether I was recommending that we should
22 simply look at net present value calculations in making
23 timber management decisions, and I believe it was the
24 force of my evidence that for various reasons we should
25 consider other factors as well.

1 MR. MARTEL: Okay, fine.

2 MR. FREIDIN: Q. And we'll get into your
3 case study later, but I noted in your case study and in
4 your evidence you indicated that there are factors
5 which are not quantifiable, which are not measurable
6 which can be important in making the ultimate decision
7 in relation to timber management.

8 DR. MULLER: A. That's true.

9 Q. And that some of the constraints, if
10 you will, that are described in the Benefit/Cost
11 Analyst Guide at page 52, such as technological, legal,
12 social, all those things are factors which may not be
13 able to be quantified but which must nonetheless be
14 taken into account in making decisions?

15 A. That's true, yes.

16 Q. Could you turn, sir, to page 192 of
17 the witness statement which is Exhibit 1690.

18 A. 192?

19 Q. Yes.

20 A. Yes.

21 Q. It's Table 2 that you spent so much
22 time on. Can I refer you to the bottom part where you
23 have the unevaluated benefits and costs.

24 A. Yes.

25 Q. And you've got the double pluses and

1 minuses, et cetera. What's the significance of a
2 double plus as opposed to a plus?

3 A. It was intended to indicate strength
4 of positive value rather than a comparatively weak
5 positive value.

6 Q. Okay. And could you tell me, what
7 was the benchmark against which the assessment of
8 whether any one of those alternatives was positive or
9 negative or double positive as opposed to single
10 positive, could you tell me what that was?

11 A. It was intended to be alternative A.

12 Q. All right. Which would be no timber
13 management?

14 A. That's correct.

15 Q. Do you believe that your assessment
16 in fact ranks these alternatives based on what would
17 occur naturally or are you saying that -- for instance,
18 when you've got double plus, are you saying that you
19 would have a more positive situation than you would --
20 than would occur naturally; i.e. without alternative A?

21 A. Just before I answer that, I'll
22 remind you that I'm qualified as an economic expert and
23 not as a wildlife management expert or a forestry
24 expert and, consequently, these values are there as my
25 impression of the literature which I have read during

1 the preparation of these hearings but it's no more than
2 a non-expert's interpretation.

3 The phenomenon I thought was worth
4 capturing there is that when you cut down forests you
5 grow -- you encourage the growth of young vegetation
6 which, as I understand it, provides fodder for such
7 animals as deer and moose.

8 Q. Okay, thank you. So the experts in
9 relation to wildlife may disagree with whether
10 something really is double positive, single positive or
11 negative--

12 A. Certainly.

13 Q. --with relation to the effect of any
14 one of these alternatives on, for instance, wildlife
15 volume, wildlife species, diversity, et cetera?

16 A. Certainly. I don't wish to claim
17 that those are definitive.

18 Q. All right. Thank you. Will you turn
19 to page 124, please, of the witness statement. And on
20 page 124 -- basically on page 123 you make the point
21 about no one correct way to conduct a cost/benefit
22 analysis and how it can vary, it can be very simple to
23 very sophisticated.

24 Can you advise me, sir: When Forests for
25 Tomorrow indicate that cost/benefit analysis or net

1 present value, et cetera, should be done - and they
2 refer to that in their terms and conditions - are they
3 leaving it up to the managers, the resource managers or
4 the decision makers to determine the correct way to do
5 it and the degree of sophistication which is required?

6 A. I don't believe I'm authorized to
7 speak for Forests for Tomorrow.

8 Q. Do you believe that it would be
9 appropriate to in fact leave that sort of a decision to
10 the people responsible for managing the resource and
11 making the ultimate decision?

12 A. I think the initial decision should
13 certainly be reviewed as a matter of policy by central
14 direction of the people -- the parties involved.

15 Q. And when you say the parties
16 involved, who are you referring to?

17 A. Well, I would imagine, in the first
18 instance, the ministry of the government which was
19 conducting the analysis if it was based in MNR.

20 But it seems to me that it's a legitimate
21 question -- once such a process is in place, it's a
22 legitimate question for all the parties intervening in
23 this process to ask whether or not the decisions that
24 are being done are the right ones.

25 Q. Okay.

1 MR. MARTEL: Does that include the volume
2 of wood? Would you go so far as to want a say in the
3 quantity that might be taken -- volume of wood that
4 could be taken in any timber management plan?

5 DR. MULLER: Well, I would like to be
6 assured -- if I can interpret your question as: Is it
7 right for a party who's neither working for the
8 Ministry of Natural Resources nor for the Industry to
9 be concerned about the volume taken, I would like to
10 answer that I would like to be assured that no wood is
11 being taken for which the easily measured costs exceed
12 the easily measured benefits.

13 So to that extent, I think volume is
14 important, but I don't think that it's reasonable to
15 expect outside parties to be debating over whether it
16 should be 10,000 cubic metres plus or minus 10 per
17 cent, something like that.

18 I mean, it seems to me that there are
19 some things -- some things are more important for those
20 outside parties and some things are less important.

21 MR. FREIDIN: I think I'll be asking some
22 questions on wood supply questions that may partially
23 address that so I'll deal with that later, Mr. Martel.

24 MR. MARTEL: Fine, thank you.

25 MR. FREIDIN: Q. Dr. Morrison, you made

1 reference to a 1985 survey regarding fishing in
2 Ontario. I believe it was the context of the Chair
3 asking whether willingness to pay had been used in the
4 Province of Ontario.

5 DR. MORRISON: A. Right.

6 Q. And I think you indicated that the
7 results indicated that there was willingness to pay of
8 \$490-million by Ontario residents; is that right?

9 A. That was the figure, as I recorded it
10 and as I believe it appears in the witness statement.

11 Q. Okay. And am I correct that that
12 survey assesses willingness to pay for those
13 opportunities in the present environment, and by
14 present environment I mean the environment where in
15 fact timber management occurs?

16 A. I presume so.

17 Q. All right. Therefore, that survey
18 indicates that there is a willingness of fishermen or
19 the people who were surveyed to pay \$490-million more
20 for that opportunity where timber management occurs,
21 and if that's the case, I suggest to you that may be
22 that's an indication that timber management isn't all
23 that bad in terms of fishing opportunities.

24 DR. MULLER: A. May I just interject
25 that it's some time since I read any material on that

1 study, but my impression is that the study was fairly
2 carefully set up in terms of willingness to pay for
3 certain quality of water, quality of fishing; was it
4 not?

5 I believe that there was a payment card
6 in which there was a description of high quality
7 fishing and low quality fishing. Perhaps I'm thinking
8 of a different survey then.

9 Q. But I'm saying regardless of whether
10 there was such a card or not, if people are surveyed
11 and they're surveyed asking: Would you pay more to go
12 fishing and they've got in their mind going fishing in
13 the Province of Ontario, including the area of the
14 undertaking where timber management occurs and they
15 say: Oh yeah, we're willing to pay more, you add it up,
16 it's \$490-million, I'm saying that one could infer -
17 and I think you used that word repeatedly, Dr.

18 Morrison - that that's an indication that if people are
19 willing to pay that much more for fishing opportunities
20 where timber management occurs, then timber management
21 isn't having a tremendous terrible adverse effect on
22 fishing opportunities, otherwise they wouldn't be
23 willing to spend all that money?

24 A. Before I let Dr. Morrison answer I'll
25 simply point out that for these kinds of surveys to be

1 valid you have to be quite precise about the two
2 alternatives you're comparing.

3 Q. By the way, you better explain what
4 you mean by that.

5 A. Well, you're suggesting that timber
6 management isn't all that bad because people are still
7 willing to pay for fishing in the area of the
8 undertaking.

9 I'm suggesting that the kind of surveys
10 that are most valid are surveys which would inquire
11 about willingness to pay for a certain improvement in
12 fishing or willingness to pay to avoid a certain
13 degradation in fishing, and that when you talk about
14 \$485-million you have to be quite careful to be precise
15 about the exact alternatives which are being
16 considered.

17 Q. Okay. Dr. Morrison, do you want to
18 comment or do you want me to move on?

19 DR. MORRISON: A. Well, the point is
20 well taken, you do need to consider the alternatives.
21 Timber management is not that bad compared to...

22 And one -- people may be willing to pay a
23 considerable amount, for example, may have a high
24 willingness to pay for fishing opportunities associated
25 with the hot water outflow from nuclear generating

1 stations, that's -- I don't think we should draw the
2 conclusion that we ought to have -- necessarily draw
3 the conclusion that we ought to have more nuclear
4 generating stations, for example, to generate fishing
5 opportunities.

6 Q. Okay. We're going to come back to
7 that and I'll certainly have questions for you about
8 surveys a little later on.

9 Mr. Martel asked a question - and I don't
10 care which one of you answers this - that there are --
11 you know, are the people who answer these willingness
12 to pay surveys well informed.

13 I think, Dr. Muller, you stressed the
14 importance of making sure that you provide all of the
15 required information to these people.

16 Now, would you agree that in some cases
17 that that would be an extremely onerous if not
18 unrealistic expectation if you're dealing with very
19 complex resource management type decisions?

20 And I'm not saying --

21 A. I would agree that it's one -- it's a
22 task that would require care, I don't think it's
23 excessively onerous relative to the magnitude of the
24 decisions being made.

25 What people usually do is consult with

1 the ecologists and environmentalists and try to draw up
2 pictures of what the environment would look like under
3 certain alternatives or try to relate the state of the
4 environment to things that people care about. I don't
5 think it's so onerous that you couldn't do it.

6 Q. All right. I'm just suggesting to
7 you - and I'm not in any way suggesting that the public
8 don't need to be informed and that the Ministry not
9 provide information to the public, I don't want that to
10 be taken as my suggestion - but we've heard evidence
11 about certain things about what's happening out in the
12 forest and are people happy with what's happening in
13 the forest.

14 And we've heard things like stocking of
15 70 per cent could actually indicate a hundred per cent
16 success, that survival of less than a hundred per cent
17 is acceptable, that 40 per cent stocking in fact will
18 achieve your objective in the long run just as well as
19 70 per cent stocking, and we spent hours and days on
20 dealing with that.

21 I'm suggesting that some types of
22 questions -- pardon me, informed answers require the
23 understanding of some of those things, and I'm
24 suggesting that there probably are things that you just
25 can't properly put before the public in a willingness

1 to pay survey. You'd have to give them reams of paper.

2 DR. MORRISON: A. Well, I guess I would
3 response to that by saying that a stocking rate is
4 something which is, if you like, an intermediate step
5 it's -- a stocking rate is a measurement that you make
6 on route to an objective, a forest of a particular
7 kind, particular species, particular density of trees,
8 particular age-class distribution and that it may well
9 be relatively straightforward to assess a willingness
10 to pay for particular kinds of forest, particular kinds
11 of opportunities and uses of that forest, and it would
12 require the judgment and the input of ecologists to
13 indicate the way that those goals, those publicly
14 desired goods are related back to stocking.

15 Q. Okay.

16 A. You wouldn't ask people to make
17 judgments about, for example, what is their willingness
18 to pay to use a particular timber supply model compared
19 to another timber supply model.

20 Q. Okay, thank you. Both of you spoke
21 about the willingness to pay for recreation, for fish
22 and for wildlife. If you wanted to ask about the
23 willingness to pay for continued or increased wood
24 supply, am I correct that no attempt was made in your
25 case study to in fact capture what northerners or

1 society as a whole would be willing to pay to avoid
2 community disruption and its attendant difficulties for
3 individuals that might in fact be caused due to a
4 reduction in the availability of timber.

5 That's sort of long-winded, I can shorten
6 it up if you didn't understand it.

7 DR. MULLER: A. There's no line item in
8 the cost/benefit study which reflects possible external
9 costs associated with reducing timber supply.

10 Q. And that would include, there's
11 nothing -- there's no attempt to capture what in fact
12 northerners or society as a whole would be willing to
13 pay to avoid the community disruption and all those
14 sorts of things that we talked about. You just didn't
15 include that in your analysis?

16 A. That's correct.'

17 Q. Thank you.

18 DR. MORRISON: A. I might just add that
19 willingness to pay for changes in wood supply is
20 captured to some extent by the price of wood and the
21 prices of wood commodities -- wood derived commodities.

22 Q. I don't understand that.

23 A. Okay. The willingness to pay in U.S.
24 markets for wood products from Ontario forests is
25 measured by the price that U.S. customers are willing

1 to pay for those commodities.

2 Q. Right. But I'm talking about --
3 we're talking about assessing social benefits, economic
4 benefits and I'm saying that your case study, for
5 whatever reason, did not include the social cost that
6 could occur for some communities and certain
7 individuals in those communities which could occur if
8 in fact there was a reduction in the availability of
9 timber, and you basically I think agreed that you
10 didn't do that?

11 A. Right. But I guess what I was
12 understanding from your question was that you were
13 trying to ask -- you were asking whether we had done
14 any assessment of the willingness to pay for changes in
15 timber supply.

16 Q. No, no, I'm talking about --

17 A. You were reflecting simply those
18 social -- external social problems?

19 Q. That's right. And you didn't include
20 that?

21 A. No.

22 Q. All right. And I suggest to you that
23 if one is concerned about the environment, including
24 the social environment, and you were doing a real case
25 study you would have to in fact make an assessment of

1 that particular event, you'd have to balance off the
2 willingness to pay for wildlife against northerners or
3 maybe even southerners anywhere, who would be willing
4 to pay for those things, that level of stability that
5 might be in fact created by maintaining the wood
6 supply?

7 DR. MULLER: A. I'll remind you that
8 most of the discussion of the case study focused on
9 timber benefits rather than bringing in the wildlife or
10 recreational benefits as well, but in principle I agree
11 with you, you have to be very careful about the
12 measurement of these things, but in principle you're
13 correct.

14 Q. Thank you very much. If I might just
15 before the lunch break follow up on some
16 cross-examination by Ms. Seaborn about what the
17 relationship is between the public consultation process
18 and willingness to pay and, as I understand it,
19 basically you're saying you should have both, you
20 should supplement the public consultation through
21 willingness to pay surveys?

22 A. I think that's fair enough.

23 Q. Okay. Now, there has been a lot of
24 evidence -- and you made the comment I think, Dr.
25 Muller, was that people think that really no matter

1 what they say perhaps they're not heard.

2 A. That's my impression from general
3 reading and also, in particular, I think comments in
4 the Lake Beardmore Nipigon Watchdog Society brief.

5 Q. Right. Now, there have been a lot of
6 suggested terms and conditions by all of the parties to
7 try and improve that, particularly if I can refer to
8 terms and conditions by the Ministry of Natural
9 Resources about having a number of open houses, having
10 public notices, having stakeholder committees which in
11 fact would have representatives of all the various
12 groups that could be identified that would be
13 interested in timber management locally, that you would
14 produce maps which would be understandable by the
15 public, that you would produce brochures to tell people
16 what was going on and try to get them interested, try
17 to get them out and involved in timber management.

18 Now, let's assume that all of that
19 effort, and maybe even more that gets added to the
20 public consultation process, actually works and people
21 feel that they have a real input and are being listened
22 to in terms of their concerns, would you give the same
23 answer that you would need both that public
24 consultation process and willingness to pay surveys?

25 A. I think so, yes, I would.

1 Q. Okay. And if there is a limited
2 amount of resources - I'm talking both manpower and
3 dollars - to do all of these things, if in fact there
4 is a good chance, one believed that there was a good
5 chance that you could improve public involvement and
6 you could in fact determine what was important to them
7 through that public consultation process, that your
8 money would be better spent by pursuing improving the
9 public consultation process than spending part of it on
10 willingness to pay surveys with all of their
11 limitations that we've talked about?

12 A. Well, as you probably know, Mr.
13 Freidin, there's an economic principle that says you
14 should be looking at the value you get out of the last
15 dollar spent on each activity, so that you should be
16 organizing your limited budget so that the usefulness
17 of the extra information you get from willingness to
18 pay surveys is worth just as much to you as the extra
19 information you get from further refining the public
20 participation process.

21 Q. And do you think that the views of
22 resource managers that live in the communities where
23 these activities are occurring and who are organizing
24 these open houses should be an important consideration
25 in determining which approach is most likely to in fact

1 give them a good reflection of what is important to the
2 public?

3 A. You see, I think we're expecting too
4 much of the public participation process. I think the
5 public participation process can be very useful in
6 giving people the feeling that their concerns are heard
7 and giving people the opportunity to bring local
8 knowledge to bear on decisions, because often we hear
9 stories about decisions which are imposed on local
10 communities without sufficient knowledge of what's
11 going on on the ground, so there are important roles,
12 important aspects of public participation.

13 It's also possible that through public
14 participation you can get some kind of consensus
15 amongst some of the competing groups about what the
16 best thing you desire to achieve is; however, I don't
17 think that you can use public participation to
18 eliminate all conflict; that is, I think that there are
19 conflicting uses of the resource and ultimately we have
20 to make -- we will often be in the position of having
21 to make a decision which helps some people and hurts
22 other people, and I think it's unrealistic to expect
23 the public participation process to provide us with
24 complete information on how we should make that choice.

25 Q. You're not suggesting for a second,

1 are you, that all these conflicts are going to be
2 resolved if you use willingness to pay surveys and
3 cost/benefit analysis; are you?

4 A. I'm saying that cost/benefit analysis
5 us provides us with one set of clear criteria on how to
6 settle the conflicts and if you supplement them with a
7 commitment to distributional justice, then it's a
8 pretty good way to start. I'm saying it will settle
9 the thing.

10 Q. Well, all right.

11 MR. FREIDIN: I think maybe this is a
12 good place start off, I'll pick up with that when we
13 come back from lunch, Madam Chair.

14 MADAM CHAIR: All right. We'll take our
15 hour and a half lunch break then.

16 ---Luncheon recess at 12:00 p.m.

17 ---On resuming at 1:30 p.m.

18 MADAM CHAIR: Please be seated.

19 Mr. Freidin, we're going to take our
20 afternoon break a little later today at three o'clock.

21 MR. FREIDIN: Okay.

22 Q. Can I just pick up where we left off
23 with you, Dr. Muller, and I think I had asked you
24 whether it was your view that use of these willingness
25 to pay surveys and cost/benefit analysis models was in

1 fact going to reduce all of the conflicts. It seems to
2 me that there's just no way that that's going to happen
3 and could you respond to that?

4 DR. MULLER: A. I don't think that it
5 will eliminate conflicts, no.

6 Q. While we're dealing with that, if I
7 could go to you, Dr. Morrison. Would you turn to page
8 37 of the witness statement.

9 DR. MORRISON: A. Okay.

10 Q. You make a reference to linear
11 programming and, in particular, page 37 under the
12 heading Linear Programming you make reference to
13 FORPLAN which I understand is a model -- a tool which
14 is used for cost/benefit analysis.

15 A. It's used for making forest
16 management planning decisions in the United States and
17 it has as ones of its possible criteria net present
18 value.

19 Q. Right. So it incorporates this idea
20 of net social benefit or net present value?

21 A. It incorporates net present value, it
22 doesn't necessarily incorporate all of the kinds of
23 factors that we've been discussing in terms of net
24 social benefit.

25 Q. Okay. Now, you say that:

1 "This model can solve land allocation
2 problems, management activity scheduling
3 problems and output mix problems, it
4 explicitly includes other forest
5 resources besides timber."

6 Now, what is it that you are suggesting
7 that it solves, and the reason I ask you is I
8 understood Dr. Muller just said that these models can't
9 solve all of these things and, therefore, I would
10 assume therefore that there would still be outstanding
11 conflicts?

12 A. Okay. In this sentence I'm using
13 solved in a technical sense, in that if you posed the
14 problem: What is the best mix of various uses of the
15 land, or what is the best mix of outputs from a land --
16 forested land, what is the optimum given a particular
17 objective, such as, maximizing net present value.

18 And in that sense the model solves --
19 produces a result that can be used in decision-making.

20 Q. But FORPLAN, am I not correct,
21 involves factors which can be quantified or put into
22 measurable terms?

23 A. That's correct.

24 Q. It does not include those subjective
25 non-measurable, non-quantifiable factors that Dr.

1 Muller and I described.

2 A. That's correct.

3 Q. All right. So it might solve it in
4 an equation or some sort of mathematical view, but it
5 certainly does not do away with the need to consider
6 those important non-quantifiable more subjective sorts
7 of elements that Dr. Muller referred to?

8 A. It doesn't do away with the need to
9 consider those, but come back to the point that we made
10 in our direct evidence, is that you can go a long way
11 towards improving your forest management by taking even
12 a much simpler approach than FORPLAN, you can then
13 extend it to include some perhaps easily measured
14 non-timber values, hunting and fishing are perhaps the
15 best examples in Ontario, and can go on then to
16 include, as appropriate, in the decision-making other
17 less readily quantifiable factors.

18 Q. Right. But if you have a very simple
19 model, it's not obvious -- you haven't considered all
20 of the parameters and, therefore, I'm just suggesting
21 to you that you still have to consider those important
22 qualitative or subjective sorts of factors that Dr.
23 Muller referred to and you can't rely solely on the
24 results of this FORPLAN model to make your ultimate
25 decision?

1 A. Well, certainly a model is not going
2 to make a decision, it's going to be a person or group
3 of people that would be making a decision. People will
4 be using tools such as models to guide them in those
5 decisions, but I think that it's important to recognize
6 that there are perhaps two ways in which you can
7 consider factors: one is to include them explicitly in
8 a model, include them in a cost/benefit analysis; the
9 other one is to identify or think about their possible
10 impact, and this might take the form, for example, of
11 identifying what would be the loss in net present value
12 associated with considering or including a particular
13 constraint such as sustainability or such as avoiding
14 water courses when you're planning roads in your
15 analysis.

16 Q. Just let me make sure I've got the
17 answer to one of my earlier questions. Did you agree
18 or disagree that FORPLAN involves or includes in the
19 model factors which can be quantified; it does not
20 include the non-quantifiable ones?

21 A. That's right, FORPLAN, does not
22 include.

23 Q. Okay. Now, you made a comment during
24 your evidence, you were talking about the valuation of
25 non-timber benefits, and you said that it's being used;

1 i.e., the valuation of non-timber benefits, is being
2 used on an operational basis in the United States.

3 A. That's correct.

4 Q. And it was in regard to that evidence
5 that you said that doing that - and I took it you meant
6 valuing these non-timber values - is like trying to
7 nail jelly to the wall, the United States Forest
8 Service have nailed it to the wall and it is staying
9 there. Now, what exactly did you mean by that?

10 A. Well, Mr. Martel was the author of
11 that metaphor or person who used that metaphor first,
12 so...

13 Q. All right. Go ahead.

14 A. But what I was trying to say with
15 that comment and the extension of his metaphor was that
16 it's my understanding that the United States Forest
17 Service has incorporated measures of willingness to pay
18 into their forest planning system and into their forest
19 planning decision process and thus are incorporating
20 non-timber values into that process.

21 Q. Right. When you use the phrase, they
22 have nailed it to the wall and it's staying there, I
23 took it that you were suggesting that they had not only
24 incorporated it but in fact it was an accepted
25 procedure which was finding favour with all people who

1 are involved in timber management planning or forest
2 management planning in the United States. Was that the
3 intent that you were intending to convey?

4 A. Well, I wouldn't put it perhaps that
5 strongly because for use of any method in timber
6 management planning you're going to have people who
7 disagree. I mean, there are people who disagree with
8 use of FORPLAN as a timber management tool in the
9 United States.

10 Q. Why?

11 A. They have concerns about its size and
12 its complexity, I might point out that there are other
13 tools which are less complex which are perhaps
14 preferable under some circumstances which incorporate
15 some -- can incorporate non-timber values and can carry
16 out some of the timber supply analysis functions that
17 FORPLAN does.

18 Q. Was your evidence to be taken to
19 indicate then, or are you saying that there are groups
20 in the United States that do in fact oppose the use of
21 FORPLAN?

22 A. I'm not aware of specific groups that
23 oppose it, I know of academic and technical concerns
24 that have been raised about FORPLAN.

25 Q. If in fact there were people who did

1 not advocate, in fact didn't like the use of FORPLAN
2 for forest management, would it be fair to say that
3 those people would not agree with you that the
4 valuation of non-timber benefits had been nailed to the
5 wall?

6 A. No, I think it's important to
7 distinguish --

8 Q. No, would they agree or disagree with
9 you?

10 A. I don't know, because I think it's
11 important to distinguish between the use of FORPLAN,
12 which is a specific planning tool, and willingness to
13 pay information which is a much more general set of
14 economic data which can be used for making forest
15 management decisions.

16 I mean, for example, a forester in
17 northern Ontario who was not using any kind of an
18 economic analysis at all might consider willingness to
19 pay kind of information in terms of trying to assess
20 the relative importance of various factors.

21 Q. Okay. Hopefully one last question on
22 this and this is in relation to your comment that the
23 valuation of non-timber benefits in fact is not only
24 been nailed to the wall but in fact it was staying
25 there in the United States.

1 If you had a group of concerned
2 individuals, and let's put them in the United States
3 and let's assume that it even included environmental
4 groups, and they said FORPLAN resists public
5 understanding, FORPLAN is unable to cope with the basic
6 non-linearity of natural biological processes and that
7 FORPLAN cannot account for environmental quality, I
8 suggest to you those people would disagree with you
9 that the valuation of non-timber values had been nailed
10 to the wall and it was staying there.

11 Would you agree or disagree with my
12 proposition?

13 A. Well, I would disagree because, as I
14 was trying to make the point a moment ago, it's
15 important to distinguish between willingness to pay
16 kind of information, which is what I was directing the
17 metaphor towards, in the willingness to pay information
18 can be a vote through well established techniques, a
19 wide range of techniques that are in use in many
20 different circumstances in Canada and elsewhere.

21 It's important to distinguish between
22 that set of data and that set of techniques and a
23 specific application of a specific tool, FORPLAN in
24 this case, in the United States forest planning system.

25 Q. Okay, thank you. Could you turn to

1 page 126 of the witness statement, please. Now, what I
2 want to do is ask you some questions regarding your
3 evidence as to the appropriate level at which
4 cost/benefit analysis should be used, and I think it's
5 clear - it's clear to me - that your evidence,
6 gentlemen, is that it's most appropriately used at the
7 forest management unit level. Am I correct on that?

8 DR. MULLER: A. It's certainly very
9 appropriate to use at the forest management unit level.

10 Q. And, Dr. Morrison, that's your view
11 at as?

12 DR. MORRISON: A. Well, that technique
13 can be used at the forest management unit level, it can
14 also be used at the provincial level and at the lower
15 than forest management level when you're considering
16 alternatives within a forest management unit.

17 Q. All right. Now, on page 126 you
18 basically say that it should be conducted at the forest
19 management unit level, that's what you say at the top.
20 You say in 5.2.1.1 that the stand level is too small to
21 accommodate all the interactions, and you say the
22 provincial level combines too many essentially
23 independent problems.

24 Now, that seems to me that the witness
25 statement is saying it's inappropriate at the stand

1 level, it's inappropriate at the provincial level for
2 the purpose of making the kinds of decisions that
3 you're talking about and that it should be done at the
4 forest management unit level. It seems to conflict
5 with what you just told me and maybe you can just help
6 me out.

7 DR. MULLER: A. Well, I draw your
8 attention, Mr. Freidin, to page 127 Item 5.2.1.3.

9 Q. Yes.

10 A. Which says:

11 "Analysis at the FMU level must still
12 account for important interactions at
13 the provincial level, for example, the
14 amount of wilderness recreational land
15 remaining in the province."

16 And my concern with the line of
17 questioning is that simply I don't want to rule out the
18 importance of using cost/benefit analysis at the
19 provincial level in order to address questions such as
20 those.

21 Q. All right. When you refer to that
22 section on page 127, is another way of saying that;
23 that is to say, that the degree of flexibility that one
24 has at the forest management unit level regarding
25 objectives and inputs is constrained or must be

1 constrained by objectives set at higher levels of
2 decision-making, such as provincial policy?

3 A. I'm sorry. Did you ask whether I
4 agreed that cost/benefit analysis at the forest
5 management unit level must be constrained by provincial
6 policies, overall provincial policies?

7 Q. All right, let's start with that.
8 Cost/benefit analysis. Can you answer that question?

9 A. I think it must be -- account must be
10 taken of provincial constraints.

11 Q. All right. And as I say does that,
12 therefore, mean or can I take that to include a
13 statement that the degree of flexibility that one has
14 at the forest management unit level regarding the
15 objectives and the inputs could be constrained by
16 objectives set at the provincial level?

17 A. Well, to take a specific example, I
18 presume that if there was a provincial objective to
19 dedicate a certain number of hectares to wilderness,
20 non-road access -- wilderness based recreation with no
21 road access, that that could constrain the decisions at
22 appropriate forest management unit levels.

23 Q. Right. As could a decision at the
24 provincial level that certain areas would in fact be
25 available for the activity of timber management?

1 A. That's also true.

2 Q. Would you turn to page 156, please.

3 In the same vein, gentlemen, at the top of page 156
4 dealing with provincial economic issues in timber
5 management it states:

6 "It is also at the provincial level that
7 political decisions establish the
8 policies, regulations and pending
9 programs which shape the context of
10 forest management decisions."

11 Would the essence of that sentence be the
12 same if I changed the word shape to constrain?

13 A. I'm not sure. I would think that
14 conditions at the forest management unit level might
15 constrain provincial policies.

16 Q. Right.

17 A. So that we're talking about movements
18 in both directions.

19 Q. If the provincial goal, policy,
20 regulation was in fact developed through a
21 consideration of the capability of the management units
22 to produce something and at the provincial level, as a
23 result of that assessment, they made a certain policy
24 in that context, would you agree that the policies made
25 at the provincial level could constrain the context of

1 forest management decisions?

2 A. The policies made at the provincial
3 level certainly constrain the decisions. I think it's
4 important to have information about the effect of these
5 constraints.

6 Q. That's fair, okay. When you were
7 dealing, Dr. Muller, with exhibits - and I'm not sure
8 whether you have to look at this - 1695C where you set
9 out -- let's just take a look at it so we know what
10 we're talking about. Exhibit 1695C.

11 A. I have the bundle.

12 Q. Overhead No. 12, where you set out
13 the problem, the objective and the interpretation.
14 This was your introduction I think.

15 A. That's correct.

16 Q. Now, during - it may not be
17 necessary, Mr. Martel. What you were talking about, I
18 think you were explaining how you came up with the
19 objective of betterment of people of Ontario by wise
20 management of the forest environment.

21 A. Yes.

22 Q. In that context you said an analyst
23 has to look at the policy objective given.

24 A. Yes.

25 Q. Can you explain what you meant by

1 that?

2 A. Well, it's conventional in discussing
3 these matters with economists and economic students to
4 put the economic analyst in the position of an advisor
5 to a policy maker and it's assumed very frequently that
6 the policy maker says what it is that he wishes to
7 achieve and that it is then the job of the economic
8 analyst to address the question of how it can best be
9 achieved.

10 Q. Thank you very much. Dr. Muller, if
11 you had a provincial forestry program, can we agree
12 that that would be a decision which would be made at
13 the provincial level?

14 A. I'm sorry, if we had what kind of
15 program...?

16 Q. Let's say the government decides we
17 want to have a provincial forestry program, we want to
18 have a forest industry here, we want it to produce
19 whatever benefits it produces, that would be a decision
20 which would be made at the provincial level. You would
21 expect that that's where that decision would be made?

22 A. You're talking about an all or
23 nothing decision, either we have a forest industry or
24 we don't have a forest industry.

25 Q. That and the amount of fiber that the

1 province wished to be made available to industry.
2 There's two questions there, can you answer both of
3 them?

4 A. Well, obviously one could make a
5 decision at the provincial level about whether or not
6 one was going to have a forest based wood processing
7 industry and one could make at the provincial level a
8 decision about the amount of fiber that was going to be
9 made available.

10 It might not be the best decision to make
11 because, for example, as I think Dean Baskerville
12 stressed, it's important to make wood supply decisions
13 in the context of the capability of individual forest
14 management units to supply the wood and individual
15 mills demanding the wood. So that it's not necessary
16 to make precise target -- precise policy decisions
17 about the amount of fiber at the provincial level.

18 Q. All right. Let's assume for the
19 moment, Dr. Muller, that we do have a provincial policy
20 that does decide that there can be a forest industry
21 and as a result of an analysis of the capability of
22 management units to produce timber--

23 A. Mm-hmm.

24 Q. --looks at that, maybe even does
25 cost/benefit analysis in relation to all that

1 information, but comes up with a decision nonetheless
2 and, as a matter of policy, says we're going to assign,
3 based on all this information and all this assessment,
4 targets to all those forest management units to produce
5 a certain volume of timber for the purposes of
6 industry, okay.

7 In that situation would you agree, I'm
8 sure you will, that each forest management unit would
9 be relied upon to in fact contribute to the achievement
10 of the overall provincial goal?

11 A. Well, I'd like to backtrack just a
12 little bit. You suggested that it might be the
13 objective of the provincial government to guarantee a
14 certain time path of wood supply for province shall we
15 say, that is, you suggest that it might be the
16 objective of the provincial government to say we will
17 have a certain volume of wood supplied in the province
18 over the next 50 years or however many years.

19 Q. Right.

20 A. I would view it as the responsibility
21 of the economist to suggest to the provincial
22 government policy makers that it's important to know
23 whether or not that decision maximizes gross domestic
24 product and, if not, how much you're giving up to make.

25 Secondly, I would think that it would be

1 appropriate for the economic advisor to say to the
2 policy maker, given that you have committed yourself to
3 providing this wood supply, you should consider how it
4 can be supplied at least possible cost and that --

5 Q. No, let me --

6 MS. SWENARCHUK: Mr. Freidin, let him
7 answer the question.

8 DR. MULLER: And that might not mean
9 imposing relatively inflexible targets on each forest
10 management unit, which is the point I was trying to get
11 to.

12 MR. FREIDIN: Q. All right. Now, what
13 you're talking about is how it may be appropriate to
14 develop that provincial policy, the kinds of input that
15 you think an economist might in fact provide or should
16 provide for that.

17 I'm asking you the question on the
18 premise that a policy has already been developed - and
19 I'm leaving aside for the moment whether it had all the
20 right inputs or not - but a policy decision has been
21 made with whatever advice has been obtained and the
22 policy is, as I have described it to you.

23 Now, having made a policy decision that
24 that amount of wood should be provided to industry for
25 whatever reason the government felt was appropriate,

1 they thought it was a benefit whatever, I'm asking you
2 to agree that in that situation each forest management
3 unit would be relied upon to contribute to the
4 achievement of that overall goal?

5 A. If the provincial policy was that
6 each forest management unit should provide a specified
7 amount of wood in each time period then, yes, indeed by
8 definition each forest management unit would be relied
9 upon to meet that objective.

10 Q. All right. And if it was made even
11 broader, it was done -- all right, that's fine.

12 Now, could you refer to Volume 168 of the
13 evidence at page 29891. Okay. Now you, Dr. Muller,
14 referred to Dean Baskerville talking about how
15 important it was to look at the land, the capability of
16 management unit. I refer you to lines 9 and the
17 question that I asked him was:

18 "Where you've got this provincial
19 objective....", and it's the same one
20 I've just talked to you about:

21 "...and you want to achieve it through
22 the activity on all of these management
23 units, would you agree that it would be
24 unreasonable to give to any one
25 management unit the level of autonomy

1 that would allow it to in fact say: No,
2 we think on this unit what we want is
3 wilderness not timber management, or in
4 another unit they would have the autonomy
5 to say: No, we don't want timber
6 management here we want wilderness.
7 I'm suggesting that that would be
8 unreasonable."

9 Dean Baskerville says:

10 "If not unreasonable, certainly
11 dangerous. It comes back to this issue
12 of whether or not there is a vertical
13 nesting in both directions, upwards of
14 the capabilities of the forest that
15 determine the provincial-wide objective,
16 and downwards the actions that deliver
17 the province-wide objective, and there
18 has to be -- they don't have to be even
19 and the same in all of the management
20 units, but the output, the net effect
21 must deliver what is sought. So that you
22 can't have consistency at the provincial
23 level unless there is some structured
24 Performance standard at the unit level to
25 ensure that you deliver your part of the

1 provincial objective."

2 Now, it seems to me that Dean Baskerville
3 in a discussion of the same policy objective that I put
4 to you is suggesting that -- well, first of all, do you
5 agree -- I think it's clear what he said, do you agree
6 with him?

7 A. I agree with his insistence that
8 there should be compatibility between local actions and
9 provincial goals. I would modify his statements in the
10 following way. I think it's dangerous to allow
11 regional autonomy if you aren't sure that you're giving
12 the people at the local level the right signals. And
13 perhaps I could amplify that just a little bit.

14 Q. Please.

15 A. Suppose you wanted to have more
16 recreational hunting opportunities and suppose that you
17 were reasonably confident that you could tie
18 recreational hunting opportunities to forest management
19 through the mechanism that forest management provided
20 more fodder for the hunting, it might be appropriate to
21 put what's called a shadow price on hunting
22 opportunities and say to the local forest management
23 unit: Value hunting opportunities at a hundred dollars
24 a day in drawing up your plans, and then you could say
25 to those local forest management unit: Go ahead and

1 maximize the net present value of your operations
2 including, as part of your calculations, your
3 assessment of the value of the hunting opportunities
4 that are going to be produced.

5 What I'm suggesting really is that
6 there's more than one way to skin a cat, there's more
7 than one way to assure consistency between the local
8 activities and the provincial decisions, and one of
9 those ways is by direct quantity constraints and
10 another is by giving people the right price signals,
11 and I think it's a matter of judgment as to the best
12 mix.

13 Q. But Dean Baskerville has said -- I
14 think that by going the second route that you're
15 suggesting about putting sort of price indicators out
16 there you are in fact allowing, or putting into place a
17 system where a decision might get made at the local
18 level which would result in that management unit not
19 being able to provide its contribution to wood supply,
20 and if that happened all across the province then your
21 provincial goal might as well be thrown out the window.

22 A. If that happened all across the
23 province you would have set the wrong price.

24 Q. All right. You're talking about
25 policy at the provincial level as to whether we should

1 be in the business of forestry at all, and I'm - with
2 respect I think that's what you're talking about - and
3 I'm trying to talk about having already been given, as
4 you have stated in your evidence, the analyst at the
5 forest management unit has to look at the policy
6 objective given.

7 And I'm telling you for the purpose of
8 this question that the forest management unit manager
9 has been given a policy objective or is part of it and
10 that's to produce the amount of wood.

11 And I'm suggesting to you in that
12 situation, Dr. Muller, you can't put into place a
13 scheme which could in fact end up with a decision at a
14 management unit level that they weren't going to meet
15 that target because they were going to turn the whole
16 unit into wilderness, because if you did that you might
17 as well throw the provincial policy out the window.

18 A. Well, I disagree with the
19 construction you're putting on this because I think
20 that the appropriate provincial objective, once you've
21 committed the province to supplying a certain amount of
22 wood then I think that the next objective is to supply
23 that wood at least possible cost, including a
24 consideration of environmental costs.

25 I think that that may be best done by

1 giving the appropriate price signals to local foresters
2 who can then respond to it. I don't -- you see, I
3 don't really want to commit myself to giving
4 quantitative objectives to each forest management unit.

5 Q. Okay. We're going to come back to
6 this a little bit.

7 A. Okay.

8 Q. Page 1 of your witness statement,
9 this is all sort of part of this issue, and you state
10 at page 1 of your witness statement -- by the way,
11 Doctors, I'm not out here to get you to agree with
12 everything, I'm just trying to make sure I understand
13 you.

14 Page 1 you indicate, the last paragraph:
15 Section 3 of your report reviews economic issues
16 associated with each of the constituent activities of
17 timber management, land allocation, development of
18 access, et cetera.

19 Now, am I correct if we go to page 28 we
20 find out what you mean by land allocation, and if we go
21 to page 28 at the bottom we're talking about land use
22 allocation. If we go right to the very bottom of page
23 28:

24 "Land allocation decisions determine the
25 land base on which timber harvesting may

1 be conducted."

2 And I think there's further elaboration

3 at the last full paragraph where it says:

4 "The key issues in land allocation are
5 whether an area of forested land should
6 be developed and, in particular, whether
7 it should be allocated to timber
8 production."

9 Where did you gentlemen get the idea that
10 land use allocation was part of the undertaking of
11 timber management? Because I put it to you, gentlemen,
12 that as defined in the Class Environmental Assessment
13 Document it is not, it is clearly not a constituent
14 part of timber management.

15 Take your time.

16 DR. MORRISON: A. I would suggest that
17 in fact land allocation is an important part of timber
18 management.

19 Q. No, no. Don't tell me whether --

20 MS. SWENARCHUK: Excuse me, Mr. Freidin.

21 MR. FREIDIN: Q. Don't tell me whether
22 it's important, tell me whether it's part of the
23 definition of the undertaking in this environmental
24 assessment. Don't tell me whether you think it's
25 important or you think it should be; is it?

1 MS. SWENARCHUK: That was not your
2 original question. Your question did not ask him for
3 the definition of the undertaking. You asked whether
4 it's part of timber management, which is a different
5 question than the definition of the undertaking.

6 MR. FREIDIN: Q. All right. Let me
7 change it. Is it part of timber management as defined
8 in this class environmental assessment?

9 DR. MULLER: A. May I answer this? On
10 page 1 of the Timber Management Planning Manual for
11 Crown Lands in Ontario--

12 Q. Right.

13 A. --you will find the statement, four
14 paragraphs down --

15 MADAM CHAIR: Mr. Freidin, sorry, Dr.
16 Muller is reading from the Timber Management Planning
17 Manual.

18 MR. FREIDIN: So am I.

19 MADAM CHAIR: Is that what you're reading
20 from?

21 DR. MULLER: You will find the statement
22 that:

23 "The objective of the forest management
24 program on Crown Land in Ontario is to
25 provide for an optimum continuous

1 contribution to the economy by forest
2 based industries consistent with sound
3 environmental practices and to provide
4 for other uses of the forest."

5 Now, in order to provide for other uses
6 of the forests it may sometimes be necessary to
7 allocate land to those uses as opposed to timber
8 management -- as opposed to using it for timber
9 production and, therefore, we felt or at least I felt
10 that land allocation is a perfectly legitimate item to
11 address in evaluating timber management in Ontario.

12 MR. FREIDIN: Q. All right. Here's
13 where we get into the legal issue, and I'm not going to
14 ask you for a legal opinion, but could you turn to page
15 9 of the Environmental Assessment Document.

16 MS. SWENARCHUK: Madam Chair, I'm going
17 to raise my objection here. Because of objections
18 raised by Mr. Freidin and Ms. Murphy outside of the
19 hearing, we were particularly careful to indicate to
20 the Board in advance the limits of these experts'
21 position with regard to such issues as the definition
22 of the undertaking.

23 It's patently obvious that one cannot
24 enter into planning for harvest, access, renewal and
25 tending, timber management activities, without deciding

1 on what land it's going to occur and to that extent
2 it's patently obvious that that decision is part of the
3 decision of timber management.

4 Now, whether the definition of the
5 undertaking as explicitly stated in the Class EA
6 includes those words or not, and whether the witnesses
7 have an opinion on that question, following from Mr.
8 Freidin's objection to us previously, I would suggest
9 it's quite irrelevant.

10 It's quite open to Mr. Freidin to argue
11 before you at the end of the case that the explicit
12 words of the definition of the undertaking do not
13 include reference to land allocation. In my
14 submission, the legalities of that definition are
15 something to be argued before you, something which Mr.
16 Freidin has been clear privately and before the Board
17 are not matters for these witnesses to comment on.

18 We have played the game that way to be
19 fair to his objection, and I'm requesting that at this
20 point he leave those legal issues aside as well for
21 later argument.

22 MR. FREIDIN: Madam Chair, it's not a
23 legal issue I'm putting to the witnesses. The
24 witnesses have done a case study, they have in fact
25 evaluated and come up with pluses and minuses based

1 upon a definition of the undertaking which includes the
2 allocation of land use.

3 It's going to be my suggestion to these
4 witnesses that if in fact the allocation of land use is
5 not part of the undertaking, they've done a case study
6 on something which is not before the Board, and that
7 goes to the weight that their evidence, as a result of
8 the case study, should be given. So it's not a legal
9 question.

10 I want confirmation that the description
11 of the undertaking as I read it to them is different
12 than what they defined it as, and then I'm going to
13 explore with them what effect, if any, that would have
14 on the results their case study.

15 I think that's quite appropriate because
16 you're going to be asked to make conclusions based on
17 the case study as Dr. Muller so clearly stated to you.

18 MS. SWENARCHUK: Again, it is exactly a
19 legal question as to whether the words defining the
20 undertaking as the Ministry has put them before you
21 include such elements as, fundamental to the
22 decision-making process, as where those activities are
23 going to occur. And this may be one of the most
24 legalistic arguments you will ever hear when we come to
25 arguing at the end of the day, but I suggest it is

1 precisely a legal question, it is not a matter to be
2 put to experts who are not legal experts.

3 MADAM CHAIR: Mr. Freidin, the Board has
4 heard a lot of evidence in these last three years
5 having to do about land allocation that will all become
6 very clear, I'm sure, when you make your arguments, but
7 we've heard witness panels presented by your client
8 about how land is allocated and we've heard how it ties
9 into the overall planning process, we've heard evidence
10 about the MAD calculations reducing the land base,
11 expanding the land base.

12 The point you're getting at here is,
13 regardless of what it says in the definition of the
14 Class EA, you're saying that Dr. Muller's analysis is
15 faulty because it started with the premise that timber
16 management would have something to do with allocation.

17 MR. FREIDIN: Land use allocation, that
18 is exactly correct.

19 MADAM CHAIR: Land use allocation. Dr.
20 Muller, does your analysis do that or, in fact, does
21 your analysis assume some area of land which is
22 available for timber management but for reasons of the
23 analysis it would be more economic not to conduct
24 timber management on that land?

25 DR. MULLER: I think you put it very

1 well, the second alternative.

2 MADAM CHAIR: Does it matter if that
3 land -- does your analysis have anything to do with
4 deciding which piece of land is allocated to timber
5 planning or not?

6 DR. MULLER: The analysis reported in the
7 case study does not address the question of whether we
8 should extend the boundaries of the FMU or whether we
9 should contract the boundaries of the FMU, it takes as
10 an assumption that the objective -- that you have a
11 forest management unit and it takes as the objective
12 that this forest management unit should be managed to
13 achieve maximum net social benefit.

14 MADAM CHAIR: And so you're totally
15 ignoring Mr. Freidin's previously mentioned argument
16 that that might throw the whole planning process into
17 chaos because you would be saying one unit that was
18 already planned to produce a certain amount of timber
19 wouldn't, based on your cost/benefit analysis?

20 DR. MULLER: Well, I think that in
21 calculating the appropriate net social benefit you
22 ought to take into account the value of the timber that
23 you produce and, roughly speaking, I would say it's
24 appropriate for planning to have a value of timber
25 announced and that each -- well, each individual forest

1 management unit -- my preference would be to see each
2 forest management unit producing -- deciding whether or
3 not to allocate -- deciding the amount of timber to
4 produce based on its -- the price that it's been told
5 is appropriate for the wood that is sold, plus the
6 price that it's been told is appropriate for the
7 non-timber uses of the forest, combined with the prices
8 that it knows about for the inputs that are used.
9 That's one nice simple way of organizing it.

10 MADAM CHAIR: Mr. Freidin?

11 MR. FREIDIN: Q. Well, let me see if I
12 can avoid the objections so you don't have to make a
13 ruling by doing it this way.

14 You said, Dr. Morrison, that alternatives
15 at the forest management unit level would include no
16 harvest for timber so that you could maximize
17 recreational benefits, you said that in your evidence.
18 You stand by that, the alternatives at the forest
19 management unit level would be no harvest for timber?

20 DR. MORRISON: A. That's an alternative
21 which should be considered.

22 Q. Okay. Dr. Muller, you said the
23 problem with the process is it failed - and you're
24 talking about MNR's process - that it failed to ensure
25 that not managing a forest management unit for timber

1 supply; i.e., the null alternative, should be an
2 alternative considered?

3 DR. MULLER: A. Yes.

4 Q. Now, both of you are then taking a
5 position that notwithstanding that there may be a
6 policy objective given by way of a forest production
7 policy developed at the provincial level, that you
8 should put into place a scheme where a cost/benefit
9 analysis should be done every five years when you do a
10 timber management plan and one of the answers that
11 could come out would be no harvest for timber, the null
12 alternative is what we're going to do.

13 Now, you both said that; am I correct?

14 DR. MULLER: A. Absolutely, yes.

15 Q. Now, I'm suggesting to you if the
16 scheme that you are putting into place, if by having
17 cost/benefit analysis as you have explained it at the
18 forest management unit you are setting up a scenario
19 which Dean Baskerville says, and which I suggest to
20 you, is if not unreasonable dangerous, because you
21 could have these cost/benefit analysis, they could be
22 made in the absence of any consideration of a
23 provincial policy and you could end up with all these
24 management units, some going wilderness, some going
25 half wilderness, some going something else and you

1 might as well throw provincial policy out the window.

2 Now, don't you agree with that?

3 A. No. I don't agree with --

4 Q. What is wrong with my logic, sir?

5 MS. SWENARCHUK: Well...

6 DR. MULLER: What's wrong with your logic
7 is that it presumes that the best way of achieving
8 provincial objectives is to announce that willy-nilly
9 we will produce a certain amount of wood.

10 MR. FREIDIN: Q. I'm not saying
11 willy-nilly, I said --

12 MS. SWENARCHUK: Excuse me, Madam
13 Chair --

14 MR. FREIDIN: Now, just wait a minute,
15 Ms. Swenarchuk. I don't want to spend a lot of time
16 talking about evidence and suggestions I have made.

17 Q. I didn't say it was made willy-nilly,
18 I said the provincial policy was made as a result of an
19 analysis of the production capabilities at the forest
20 management unit level, it went all the way up to the
21 top, they did a cost/benefit analysis, they did all the
22 sorts of analysis that would be appropriate and they
23 decided, as a policy matter, that the best thing to do
24 was to make a certain amount of wood available to the
25 industry and they told the units how much they should

1 produce, how much they should each contribute. So I'm
2 not talking about a willy-nilly development of policy,
3 sir?

4 DR. MULLER: A. But what I am suggesting
5 to you is that it would be equally consistent with the
6 objectives, as you lay them out for the province, for
7 the province to take the cost of supplying wood from
8 each forest management unit as measured by cost/benefit
9 analysis techniques, aggregate all of these costs up
10 into what amounts to a supply schedule for wood from
11 the province, decide where on that schedule they wish
12 to be, and then announce a price for wood which will
13 achieve the total quantity objective that they've
14 decided upon.

15 It's a matter of active discussion
16 amongst environmental economists whether it is best to
17 insist on quantity targets or whether it's best to
18 guide local decisions by announcing prices. And I
19 certainly don't want to take a lot of time to expand
20 the details of those arguments, but basically the issue
21 is to try to take maximum advantage of the local
22 knowledge and ability of local units to make decisions
23 without unduly constraining their activities.

24 Q. Now, you said there's a dispute
25 between -- did you call them environmental economists?

1 A. I said among--

2 Q. Among environmental economists?

3 A. --environmental economists, yes.

4 Q. Whether you do it by way of quantity
5 targets or whether you do it through local
6 decision-making by announcing prices?

7 A. Yes.

8 Q. Which way you go is really saying
9 which way is the best way to develop a forest
10 production policy for the province; right? Either way
11 you're going to be --

12 A. Well, if by forest production policy
13 you mean the policy for managing the forest altogether,
14 yes.

15 Q. Okay. By forest production policy I
16 mean the policy which indicates the mechanism through
17 which wood will be supplied to industry. That policy
18 decision, whether you do it by way of quantity targets
19 or whether you do it through announcing prices, would
20 be a policy decision made at the provincial level;
21 right?

22 A. Yes.

23 Q. So what you are talking about and
24 seem to be concerned about is how one would best go
25 about developing a provincial policy, and I am going to

1 ask you to assume for the purposes of my question that
2 how one goes about developing that policy is not a
3 matter that the Board is going to decide upon, that
4 that policy, whether it's dealt with or developed
5 through quantity targets or a local decision by
6 announcing prices, will be a policy objective which
7 will, using your jargon, be a given to the analyst at
8 the forest management unit level when they prepare
9 timber management plans. I'm not sure there's a
10 question in all that.

11 Q. I'm afraid I'm going to have to ask
12 you to restate the question because I didn't catch it.

13 Q. All right. When you're talking about
14 quantity targets or local decision by announcing prices
15 being the way to go, you're talking about which is the
16 best way to go to develop a forest -- a policy at the
17 provincial level as to how we're going to supply wood
18 to industry?

19 A. Both to develop and implement.

20 Q. All right. And I'm saying, having
21 done that, if we are then worried about what happens
22 down at the forest management unit level when you're
23 preparing timber management plans to deliver on that
24 objective, to in fact implement the policy, I'm saying
25 that you can't have a scenario which would involve

1 cost/benefit analysis which might result in an
2 individual unit basically deciding to go wilderness and
3 saying to the people at the provincial level: Well,
4 gee, that was a really nice provincial goal that you
5 dealt with, I mean you use all the right methods and
6 everything but, sorry, we decided we're going to go a
7 different direction, so don't count on us for our wood.

8 A. Well, Mr. Freidin, the idea that
9 decentralized decisions can be co-ordinated without
10 benefit of central direction is an essential one in
11 economics, it forms the case for the market system.

12 It's a matter of I think very common
13 agreement, for example, that we don't need overall beer
14 production targets for the Province of Ontario, and the
15 country of Canada on the grounds that individual
16 consumers and producers of beer will organize their
17 decisions in a way which leads to the maximization of
18 the net present value of beer being achieved.

19 And in the same way it may be the case
20 that we can achieve the overall provincial objectives
21 for the forestry industry through decentralized
22 decision-making at the forest management unit level.

23 Q. And if you did that --

24 MR. MARTEL: Are you suggesting the
25 final, whatever that figure is going to be is going to

1 be decided solely by people out there at regional
2 levels, or is it not going to be decided by somebody
3 called the provincial government, what the level will
4 be?

5 DR. MULLER: With respect, Mr. Martel, I
6 think that the main determinant of how much wood that
7 is cut in any particular year is the management of the
8 pulp and paper mills and sawmills that are buying the
9 wood and those are -- you know, when we come down to
10 the ground that's what determines the total amount of
11 wood that's cut.

12 MR. MARTEL: Yes, but I'm taking it one
13 step further than that, that isn't it a case that some
14 day we're going to have to reach a figure at a point
15 where we say: Well, we can't produce any more than
16 that.

17 Somebody is going to have to make that
18 determination, maybe the costs are too high to try to
19 produce what the demands are and somebody else is going
20 to have to supply some of that demand, but that there's
21 only a certain level that this province with its forest
22 and its resources can produce, and somebody's going to
23 have to say no somewhere. That's what a forest
24 production policy should be all about; should it not?

25 DR. MULLER: No, well, I have to modify

1 what you said about somebody eventually saying no. I
2 mean, the way in which our economic system works
3 usually is that under the circumstances of limited
4 supply the price goes up and the price discourages
5 people from using the wood and that effectively
6 prevents -- effectively eliminates the need for
7 somebody to say: No, you can't have the wood.

8 What I'm trying to get at is that it's
9 certainly true that we may be -- may have a limited
10 amount of wood, it's likely that under those
11 circumstances a good way of allocating the wood is to
12 let the price of wood go up, let the companies bid for
13 the wood that is available, and use the price which is
14 being -- which is established to determine the value of
15 wood that we are using in our calculators for both
16 silviculture and other things.

17 The essence of the question, the essence
18 of the whole line of questioning I think is whether or
19 not we have to prescribe at intimate level of detail
20 the quantity of wood being produced at each forest
21 management unit level, and I would -- I think that
22 that's not necessarily the way to go in implementing a
23 forest production policy for the Province of Ontario.

24 MR. FREIDIN: Q. A couple of questions.
25 Dr. Morrison, could you turn to page 11 of the Timber

1 Management Planning Manual which is Exhibit No. 7. Do
2 you have that, sir?

3 DR. MORRISON: A. Okay.

4 Q. On page 7 in the third full
5 paragraph--

6 A. Sorry, page 7 or page 11?

7 Q. I'm sorry, page 11. In the third
8 full paragraph under the heading Determination of
9 Allocation Criteria there is a paragraph which you
10 referred to in your direct evidence on February the
11 4th--

12 A. Right.

13 Q. --which refers to allocation for
14 depletion and allocation for renewal and allocation for
15 maintenance.

16 A. Mm-hmm.

17 Q. I took it from your evidence, sir,
18 that when you read those words you interpreted those
19 words to be talking about the allocation of land use
20 and that is one of the reasons that you included
21 allocation of land use in your case -- well, in that
22 overhead that we referred to, overhead --

23 A. Yeah, that's correct.

24 Q. You included it as a timber
25 management activity; is that right?

1 A. That's right.

2 Q. Now, sir --

3 A. That was based on -- the first
4 paragraph there, 2.4.7, Determination of Allocation,
5 which begins:

6 "The process of allocation of areas for
7 operations...", and continues from there.

8 Q. Now, Dr. Muller - and this is not
9 meant to be a criticism, because there has been lots of
10 evidence - but are you aware of the evidence which was
11 given in Panel 15 which explained that term and that
12 really that does not refer to the allocation of land
13 use, rather that refers to the selection of areas for
14 harvest, renewal and maintenance from areas which have
15 already been allocated through a land use planning
16 exercise called SLUP and district land use guidelines
17 for timber management. Were you aware of that?

18 DR. MULLER: A. I was not aware of that
19 particular evidence.

20 Q. Were you aware of that, Dr. Morrison?

21 DR. MORRISON: A. No.

22 Q. And if allocation for harvest,
23 renewal and depletion as contained there meant what I
24 said, the selection from areas which have already been
25 allocated for timber management, it would have a

1 different meaning than the meaning that you two
2 attributed to it; fair enough?

3 A. Perhaps you could clarify for me what
4 the meaning is that you're attributing to it and what
5 you interpret us to be attributing to it?

6 MS. SWENARCHUK: Madam Chair, isn't this
7 a question of semantics and can't the matter be cleared
8 up -- I mean, I finally understand what Mr. Freidin is
9 asking and, that is, that it appears to me that he has
10 a particular use of the term allocation in mind, and
11 perhaps if he simply asked the witnesses what they
12 meant by the term, regardless of what some MNR
13 witnesses may have ascribed to the term at a particular
14 point in this hearing, the whole matter could be
15 brought to an immediate conclusion.

16 MR. FREIDIN: Well, all right. Well,
17 we'll leave what it really means to argument.

18 Q. But I took it from your evidence that
19 you interpreted allocation there to mean allocation
20 of -- land use allocation. Well, what do you mean by
21 allocation, gentlemen?

22 DR. MULLER: A. I mean deciding how to
23 use something.

24 Q. Which could include the null
25 alternative of no timber management?

1 A. That's true.

2 Q. You did the same, Dr. Morrison?

3 A. That's correct. And in fact that is
4 done, is my understanding of the timber management
5 planning process, where areas are allocated, areas of
6 concern are allocated away from timber management,
7 they're allocated towards areas where timber management
8 will not be carried out.

9 Q. Well, we'll just leave it as matter
10 of argument whether you interpreted it wrong, or
11 correctly or not. I suggest that you're wrong, but
12 we'll leave that as a matter of argument.

13 MADAM CHAIR: Mr. Freidin, I suggest in
14 your argument that you think of clarifying it for the
15 Board as well.

16 MR. FREIDIN: Well, let me ask some
17 questions --

18 MADAM CHAIR: Not from these witnesses,
19 from MNR's point of view.

20 MR. FREIDIN: Well, sure. All right.
21 I'd just like to get these --

22 MADAM CHAIR: Just make sure you get it
23 very clearly before the Board whether you seem to be
24 saying, as you're implying, that any land use
25 designation for timber of a certain area of land means

1 that it can never be taken out of timber production, or
2 contrarily, any area that has been designated for
3 non-timber uses can never be put into timber
4 production, that's seems to be the gist of your
5 question. That's not what the Board understands from
6 the evidence it's had for three years.

7 MR. FREIDIN: All right. Well, just let
8 me comment. I'm not saying that during an area of
9 concern planning process that an area might in fact
10 be -- you make a decision there will be no timber
11 management operations --

12 MADAM CHAIR: Nor to any amendments to
13 any guidelines or any planning guidelines.

14 MR. FREIDIN: What I'm suggesting, we
15 have a difference of opinion as to what gets done
16 during draft planning and I think I can --

17 MADAM CHAIR: That's fine. But make sure
18 it's clear to the Board at the end of the day.

19 MR. FREIDIN: Oh, it will be, it will be,
20 as will a lot of other things I hope.

21 Q. Now, let's go back to my --

22 MR. MARTEL: Isn't this shadow boxing?

23 MR. FREIDIN: No, I don't think so.

24 MS. SWENARCHUK: Absolutely.

25 MR. FREIDIN: I don't think it is at all.

1 Q. Now, let's go back to my
2 hypothetical, Doctors, where you have a provincial
3 policy which in fact says to a bunch of management
4 units that you have to produce a certain amount of
5 wood -- I'm not saying that right on the dollar but,
6 you know, within plus or minus, to contribute to this
7 overall program.

8 If the objective then is to go out and
9 harvest certain areas to produce that wood and to
10 regenerate it, regenerate it to achieve the same
11 species and density which were there before, which is
12 Forests for Tomorrow's silvicultural prescription, I
13 suggest to you that you have to do whatever is
14 necessary to achieve that regeneration, whether net
15 present value is positive or negative on either an
16 individual stand basis or on an individual forest
17 management unit basis, and I say you should be able to
18 do that -- that that would be the case because you
19 can't say don't harvest if you can't replace except at
20 the net present value, because that would fly in the
21 face of the provincial goal.

22 I'll break it down.

23 DR. MULLER: A. Yeah, please. I didn't
24 catch the exact question.

25 Q. If you're on a forest management unit

1 and you have to in fact -- you have to supply certain
2 amount of wood and you have to regenerate the area,
3 okay.

4 A. You're constrained to do that.

5 Q. You've got to regenerate the area,
6 all right.

7 A. And you also have to supply the wood.

8 Q. You've got to supply the wood and
9 you've got to regenerate the area to the same species
10 and density at least which was there when you harvested
11 it. Do you follow me so far?

12 A. You're saying those are constraints
13 imposed upon the forest manager..

14 Q. Very well. All right, we're using
15 the language -- those are constraints which are put on
16 the forest manager. All right?

17 A. Yes.

18 Q. I'm saying in that situation you've
19 got to engage in the activities which will in fact
20 achieve the regeneration objective and if those are the
21 constraints, then whether it's plus or minus net
22 present value either at the stand level or the forest
23 management unit level it's too bad.

24 DR. MORRISON: A. Well, is it true, Mr.
25 Freidin, that all you're saying is that if the forest

1 manager has no options, the forest manager has no
2 options.

3 Q. I'm saying that it doesn't make any
4 difference what the net present value is. if you in
5 fact have to produce a forest for tomorrow of a certain
6 type and size, then you're governed not by what the net
7 present value is, you're governed by the biology of the
8 forest?

9 DR. MULLER: A. You see, not entirely.
10 The more you constrain, obviously the more you
11 constrain a forest manager's decisions the less choice
12 the individual in charge of the forest has.

13 You constrain the forest manager's
14 decisions both in terms of the quantity of wood
15 supplied and in terms of the amount and nature of the
16 regeneration. It would be less restrictive simply to
17 insist that if wood is supplied it should be
18 regenerated. Regardless of which of those options you
19 take, it may be the case that there are multiple ways
20 of achieving the objective.

21 To the extent that there are multiple
22 ways of achieving the objective, I think it's important
23 that you investigate the net present value of the
24 alternatives.

25 Q. Okay. And we will definitely get to

1 whether in fact there are alternatives. But you're
2 saying then if wood is supplied, leaving aside the
3 amount, then you think it's reasonable to say that that
4 area should be regenerated to the same species and
5 density?

6 A. I said that was less constraining
7 than the constraint that you should also provide the
8 wood as well as regenerating.

9 Q. And you wouldn't have to regenerate
10 unless you supply the wood?

11 A. That's true enough.

12 Q. If I could just have one moment,
13 Madam Chair.

14 In terms of the frequency of this
15 analysis that you're suggesting be done, this
16 cost/benefit analysis, I understand that it's your
17 views that the frequency of cost/benefit analysis at
18 the forest management unit level will depend on the
19 speed with which economic components change and how
20 unpredictable they are; is that correct?

21 A. It's my view that every significant
22 planning exercise in a timber management plan should be
23 accompanied by a simple statement of costs and
24 revenues, which certainly includes a statement of the
25 full costs of roads and silviculture; that is, items

1 which are subsidized by provincial government and, in a
2 sense, that's a cost/benefit analysis.

3 So I think that cost/benefit analysis
4 should be undertaken in the 20-year planning process
5 and I think it should be undertaken at every five-year
6 interval when it's being reviewed.

7 More full-blown analyses in which you're
8 really focusing on issues of willingness to pay for
9 wilderness or issues of maintaining biological
10 diversity and the rest of it might quite legitimately
11 be postponed for the circumstances that you outline;
12 namely, you do them once and then as conditions change
13 or appear to be changing dramatically, you should do
14 them again.

15 Q. Let me just give you a copy of
16 exhibit -- pardon me, Interrogatory 9(a) and (b),
17 response to a Ministry of Natural Resources
18 interrogatory of that number.

19 MR. FREIDIN: And I'd like to have that
20 marked as an exhibit, Madam Chair.

21 MADAM CHAIR: That will be Exhibit 1709.

22 MR. FREIDIN: (handed)

23 ---EXHIBIT NO. 1709: MNR Interrogatory Question No.
24 9(a) and (b) and response thereto
 re: FFT Panel No. 7.

25 MR. FREIDIN: What was the exhibit

1 number, Madam Chair?

2 MADAM CHAIR: 1709.

3 MR. FREIDIN: Q. And I think generally
4 the answer that you gave is captured in MNR 9(a).

5 DR. MULLER: A. That's correct, mm-hmm.

6 Q. Am I correct, sir, that it's also -
7 and if you can't confirm this Ms. Swenarchuk perhaps
8 can - that it's the position of Forests for Tomorrow
9 that cost/benefit analysis also be required where there
10 is either a major or a minor amendment to a timber
11 management plan?

12 MS. SWENARCHUK: I think major amendment,
13 I'd have to check that.

14 MR. FREIDIN: Q. Take a look at major
15 amendment - I want to make sure I interpret this
16 correct - term and condition and 52 -- all right. This
17 is in the terms and conditions of Forests for Tomorrow,
18 page 41, that's Exhibit 1610.

19 And if you go to 52, and it starts on
20 page 40:

21 "For the purposes of this section...

22 3(a): Where an amendment is classified
23 as a major amendment...", you have to do
24 a number of things and 4 says you have to:

25 "...submit a report which contains a

1 cost/benefit analysis."

2 So it's there in the case of a major
3 amendment. Would you agree that it also requires that
4 when there is a minor amendment, and you find that in
5 52(4)(a)(iii) which is on page 42.

6 42, 52(4)(a) says:

7 "Where an amendment is classified as
8 a minor amendment...", you have to have
9 this report contained, and on page 42 it says in
10 subparagraph (iii) a cost/benefit analysis. So just so
11 we're clear, that's what in fact is being suggested.

12 Now, I had some difficulty, as you
13 probably saw, about doing a cost/benefit analysis at
14 the forest management unit level which could, as I put
15 it, fly in the face of a provincial policy.

16 I have equal or more concern about doing
17 a cost/benefit analysis in the middle of a five-year
18 term of a plan that might in fact -- that would include
19 a consideration of the null alternative.

20 Could you comment on that?

21 DR. MULLER: A. Well, I think that the
22 difficulties might be resolved by appeal to the scale
23 of the operation that we're talking about. It seems to
24 me that if you're talking -- I don't know the details
25 of these terms and conditions at all and I'm not party

1 to all of the evidence that's been given, but it seems
2 to me that you might be talking about amending a plan
3 so as either to harvest or not to harvest a relatively
4 small portion of a timber management unit, and that
5 this would have as its effect either a small increase
6 or decrease in the wood supply, or it might have as an
7 effect shifting the source of wood from one particular
8 area of the forest to another particular area of the
9 forest.

10 Under those conditions it seems to me
11 absolutely reasonable to consider the null alternative
12 of not using a particular block of wood for timber
13 management.

14 Q. And this would be a null alternative,
15 not using a particular block for timber management
16 which would be out of a previously -- out of an area
17 which had through another planning process been
18 identified as an area which was available?

19 A. Well, I interpret good economic
20 analysis as requiring you to consider reasonable
21 alternatives to your actions and to try and get a
22 feeling for whether or not the action you propose to
23 undertake is better than the alternatives, and I think
24 it's a very good principle to always include the
25 alternative of not doing something and, in this

1 particular case, not managing a piece of land for
2 timber production.

3 If not managing the land for timber
4 production were to cause great disturbance in the
5 timber management plan, I believe that that would show
6 up in a properly done cost/benefit analysis.

7 Q. Okay. I made reference to strategic
8 land use plans and district land use guidelines. Are
9 either of you gentlemen familiar with those documents
10 in any substantive way?

11 MS. SWENARCHUK: They were not required
12 to be familiar with them for the purpose of preparing
13 their work for Forests for Tomorrow. We did not
14 require that of them.

15 MR. FREIDIN: Well, all right. You
16 didn't require them, but the question still stands.

17 Q. Are you aware of them?

18 DR. MULLER: A. I have looked over in
19 the past, critically I've looked over a SLUP and a
20 DLUG.

21 DR. MORRISON: A. I've read a few as
22 well.

23 Q. And as you use the word land use
24 allocation, does it deal with land use allocation,
25 leaving aside whether you think it did it well or not,

1 did it deal with land use allocation?

2 DR. MULLER: A. I don't want to tie
3 myself down without reference to a particular document.

4 Q. Are you going to be cautious as well,
5 Dr. Morrison?

6 DR. MORRISON: A. I'm trying to remember
7 all the maps that I've seen from them and trying to
8 remember whether in fact there are specific land use
9 allocations made in those maps, and I don't recall at
10 the moment.

11 Q. Sure, okay. That's fine. Thank you.
12 Now, in your witness statement we have referred to page
13 126 where you said it would not be appropriate to do a
14 cost/benefit analysis at the stand level; correct,
15 gentlemen?

16 DR. MULLER: A. Page 126?

17 Q. 126, Section 5.2.1.1.

18 MR. COSMAN: This is the witness
19 statement, Mr. Freidin?

20 MR. FREIDIN: Witness statement, yes.

21 Q. "The stand level is too small to
22 accommodate all the interaction amongst
23 users."

24 And, therefore, you're saying it's
25 inappropriate, as I understand it, to be done at that

1 level?

2 DR. MULLER: A. Read in conjunction with
3 the first sentence on page 126 which says:

4 "In principle, cost/benefit analysis can
5 be carried out at the scale of
6 an individual stand's forest management
7 unit or the province as a whole."

8 Yes, the opinions expressed in subsection
9 5.2.1.1 -- the opinion expressed is that you should
10 normally not carry out cost/benefit analysis at the
11 stand level because it tends not to accommodate all the
12 interactions which are important.

13 Q. All right. Then at page - and I'm
14 just trying to make sure I understand you - at page 155
15 of the document, actually if you turn to page 154 you
16 list conclusions I think which come out of your case
17 study, and on page 155 in conclusion No. 3 you say:

18 "Current values of wood are such that no
19 harvest at all may well be the preferred
20 option for some forest management units
21 or some areas of some forest management
22 units."

23 And I was somewhat confused as to how you
24 could say that when in fact I interpreted your evidence
25 generally to be that cost/benefit analysis is

1 inappropriate at the stand level. Maybe I just
2 completely misunderstood you, but is that a
3 contradiction, it seems to me -- can you help me out?

4 A. Do you want to say something?

5 DR. MORRISON: A. Sure. Well, maybe I
6 could just point out that there are other levels of
7 analysis that you might employ below a forest
8 management unit level and above a stand level and there
9 are many thousands of stands in a forest management
10 unit level, but there may be areas within a forest
11 management unit level at which it's reasonable to
12 consider a variety of alternatives.

13 For example, you might decide that no
14 timber production from one part of a forest management
15 unit level is appropriate, and indeed that's the case,
16 is my understanding, that some parts of some forest
17 management units levels are not managed for timber
18 production largely for economic reasons, and those
19 presumably would be identified in a breakdown of the
20 forest management unit.

21 Q. Okay. Let me see if I can finish off
22 this area of cross-examination before three o'clock.
23 Would you turn to Volume 167 of the transcript.

24 DR. MULLER: A. 167.

25 Q. Yes.

1 A. Yes. Page...?

2 Q. 29657. Now, we had a little
3 discussion about Dean Baskerville and economics during
4 the break and I want to just refer you to what he said
5 and give you the opportunity to comment.

6 MR. COSMAN: I'm sorry, Mr. Freidin,
7 page...?

8 MR. FREIDIN: Page 29657.

9 Q. What happened here is that evidence
10 was being given about whether silvicultural costs were
11 written off in the year that they were in fact expended
12 or not, and the former Chairman thought that it
13 would -- he says in lines 8:

14 "Surely companies don't intend to write
15 off the entire amount of their
16 silvicultural investment in the one year
17 if the result of that investment -- you
18 know, in fact there may be adjustments."

19 He goes on, he says:

20 "Wouldn't they amortize those costs
21 normally in terms of the way they would
22 account for expenditures?"

23 Now, Baskerville says:

24 "I couldn't answer that in a general
25 sense. The examples that I have had an

1 opportunity to see is that there is a
2 tendency to treat these things as costs
3 in this year and not really as
4 investments. The only people that I can
5 that view silviculture as an investment
6 are economists but the people who
7 actually do it treat it as a cost of
8 business this year."

9 He continues at line 14:

10 "There are two things operating here.
11 Traditionally the economic approach would
12 be to take the cost of a plantation, to
13 make a yield curve and assign a value to
14 that yield curve and get a net present
15 value for that and if the net present
16 value is not greater than the cost of the
17 plantation, you wouldn't plant. And for
18 any rate of interest larger than about 4
19 per cent, certainly any rate that would
20 be used as an alternative investment, we
21 would never plant trees if we did it that
22 way."

23 And then he goes on on the next page at

24 line 3:

25 "The distinction is that if you did that

1 for a whole forest you would come to a
2 very different conclusion. You don't
3 ever expect to plant and recover the same
4 amount on that hectare, you plant so that
5 the forest itself will maintain a
6 certain level of productivity."

7 And then dropping down to line 20, he
8 recounts a conversation with Casey Irving, he says:

9 "I once went to visit one of Mr. Irving's
10 foresters in the area of plantation and
11 while I was waiting in the woods for the
12 forester to come Mr. Irving himself -
13 Casey Irving - driving a window van
14 appeared and stopped and asked who I
15 was."

16 And he wasn't asked to leave the land,
17 but going down to line 12 on page 29660 Dean
18 Baskerville says:

19 "In the discussion I asked him what
20 interest rate he used when he made his
21 calculation of net present value for all
22 these plantations that he had put in and
23 he hesitated for a moment, he turned to
24 the forester and he said: Mr. Krieger,
25 we should work that out some time, and I

1 thought: Ah, he's putting me on.

2 In the course of the conversation
3 that followed I got a lecture on the fact
4 that he was in the forestry business, not
5 the pulp and paper business, that the
6 enterprise was at a level at which he
7 made his evaluation of whether or not
8 planting worked, not at the hectare, not
9 even at the forest, but if by planting he
10 made the whole enterprise more profitable
11 then he planted.

12 He discovered the allowable cut
13 effect roughly 11 years before it was
14 written up in the literature."

15 Now, I'm no economist but it seemed to me
16 when I read that that basically Dean Baskerville was
17 saying that this whole net present value approach and
18 looking at this as an investment isn't really the way
19 to go, and that he says if you've got -- if you're in
20 forestry, and I say the province has decided has a
21 matter of policy that it's going to have a forest
22 industry, then this net present value approach isn't
23 the way you go, you've got to look at supplying the
24 industry that you want to support and you make
25 decisions about how you would regenerate based on

1 biology not on net present value.

2 DR. MORRISON: A. Can I ask a point of
3 information. How was Dean Baskerville qualified?

4 Q. Oh boy! I don't remember. I think
5 he was an expert in everything. He was certainly put
6 forward during cross-examination as an expert on
7 everything, but he was -- I don't know.

8 MS. SWENARCHUK: He was not qualified as
9 an economist.

10 MR. FREIDIN: Q. This is your chance,
11 you can have a shot at him now, if that's what you want
12 to do.

13 DR. MULLER: A. Well, exactly what was
14 the question?

15 Q. Well, it seems to me that Dean
16 Baskerville and Mr. Irving are suggesting that of
17 you're in the business of forestry, if you decide that
18 you're going to have a forest industry and you want to
19 maintain it, that don't make these decisions about how
20 you regenerate based on some net present value
21 calculation, you make it based on what the forest
22 requires; how are you going to regenerate the forest so
23 there'll be a forest there for tomorrow.

24 DR. MULLER: A. Well, I could make a
25 number of comments. One is that foresters really don't

1 like economists for precisely this reason; that is, we
2 tend to point out the fact that investing money in
3 silviculture and trees has an opportunity cost and
4 society can actually be made worse off by over
5 investing in forestry.

6 But more generally -- or more
7 specifically I guess, suppose you've committed yourself
8 to continual forestry, then it's still a matter of
9 interest as to whether or not you're achieving that
10 objective at least cost, and one of the morals of the
11 story that I was trying to tell in the direct evidence
12 is that under some circumstances it might easily be the
13 case that you can achieve this perpetual harvest
14 objective at lower measured cost by adopting the
15 silvicultural strategies promoted by Forests for
16 Tomorrow and, at the same time, avoid some of the
17 environmental costs -- less easily measured
18 environmental costs that have also been emphasized by
19 Forests for Tomorrow.

20 Q. Do you agree, Dr. Muller, that there
21 is a difference between deciding if you're going to do
22 it; i.e., practice forestry -- pardon me, there's a
23 difference between deciding whether you're practising
24 forestry at the least cost on the one hand and, on the
25 other hand, deciding whether you're going to practice

1 forestry at all?

2 A. Yes.

3 Q. And in the situation where you were
4 just talking about deciding if you were doing it at the
5 least cost, you are assuming for the purposes of that
6 answer that you are in fact going to harvest, that you
7 are going to in fact regenerate and now what you want
8 to do is you wanted to make sure that you're going to
9 regenerate at the least cost, and maybe you could use a
10 net present value for that purpose; is that what --

11 A. I'm sorry, my mind slipped on that
12 one.

13 Q. All right. You said that you may
14 want -- you want to determine if you're doing it at the
15 least cost. Doing it is regenerating at the least
16 cost; is that what you were talking about?

17 A. I said that if you have a
18 constraint--

19 Q. Yes?

20 A. --that says that you must regenerate
21 if you cut, and you also have a constraint that says
22 you have to cut, then it's still a legitimate question
23 to investigate which method of cutting and regenerating
24 does so at least cost.

25 Q. All right. And that's called a cost

1 effectiveness study?

2 A. That could easily be called a cost
3 effectiveness study.

4 Q. It's not a net social benefit
5 analysis?

6 A. Well, it could be a component of.
7 It's not a complete social cost/benefit analysis, no.

8 Q. No, but if you're making a decision,
9 if you have to regenerate and you want to do it at the
10 least cost, you're going to look at the whole suite of
11 alternatives, whether it's modified harvest, whether
12 it's artificial and all those sorts of things and you
13 can come up with the cheapest method to in fact achieve
14 the objective, the regeneration objective which has
15 been given to you; correct?

16 A. Well, remember that I've never agreed
17 that the only objective of forest management is to
18 provide a specific amount of timber, yes.

19 Q. All right. Putting it another way:
20 If the objective for regeneration is the objective
21 which has been given by Forests for Tomorrow in its
22 terms and conditions to in fact return the site after
23 harvest to the same species and density, would you
24 agree with me that you might want -- you would want to
25 do that as cheaply as possible; correct?

1 A. Given all the environmental
2 constraints we're putting on, yes.

3 Q. Right. And you believe that -- and
4 to do that might result in a net present value which is
5 not positive?

6 A. It's quite possible that doing that
7 would result in a net present value which is not
8 possible (sic) which would indicate that it might be
9 appropriate to reconsider your policy objectives.

10 Q. Right.

11 DR. MORRISON: A. And perhaps I can
12 extend --

13 Q. But given the constraints which have
14 been imposed by the policy makers, you have to go ahead
15 and regenerate that stand even though it was at a
16 negative net present value, given the constraint of the
17 policy objective that I imposed for the purpose of my
18 question; right?

19 DR. MULLER: A. Yes, given the
20 constraint which you have imposed for the purpose of
21 your question --

22 Q. Right. I knew you'd agree.

23 MR. FREIDIN: All right. It might be
24 time to break, Madam Chair.

25 MADAM CHAIR: All right.

1 MS. SWENARCHUK: Can I just remind the
2 Board that Mr. Freidin has referred repeatedly to
3 forest production policies, timber production policies.

4 Again last week I think we asked him for
5 some report on the status of the current timber
6 production forest policy and we haven't heard anything
7 and, please, when are we going to hear something?

8 MR. FREIDIN: Same answer.

9 MS. SWENARCHUK: What is the answer? It
10 was the Board's question.

11 MR. FREIDIN: The same answer is, as soon
12 as I'm in a position to do it I will do it, and it
13 doesn't do any good, Ms. Swenarchuk, to keep saying
14 when am I going to give it to you.

15 You have my undertaking that I will give
16 it to you as soon as I can and if you're not willing to
17 accept my undertaking and stop harping about it --

18 MS. SWENARCHUK: What about a status
19 report?

20 MR. MARTEL: Well, I'm afraid it was me
21 that raised it again last week. I mean, I'm having
22 some problem I'm afraid trying to review this whole --
23 this ball game that's going on in this town against a
24 policy which is 1972 and on which we're being asked to
25 make decisions, while at the same time we're being

1 asked to make decisions, a whole new policy is being
2 put in place.

3 And that's creating, Mr. Freidin, some
4 little concern.

5 MR. FREIDIN: I acknowledge the
6 frustration and the concern, Mr. Martel. I can only --

7 MR. MARTEL: So it wasn't Ms. Swenarchuk
8 who raised it last week, Mr. Freidin, it was me.

9 MR. FREIDIN: Every time you raise it I
10 convey it to my client. So they're fully aware of it
11 and I can do no more.

12 MADAM CHAIR: Is it your understanding,
13 Mr. Freidin, that in fact a new forest production
14 policy is being worked on, or do you have no
15 information whatsoever on it?

16 MR. FREIDIN: My understanding is it's
17 being worked on. I don't know the details. I'm not
18 the Ministry of Natural Resources, I'm just not aware
19 of everything that's going on in the Ministry. I'm
20 here trying to do my job and I'll assist the Board
21 whenever I can.

22 MADAM CHAIR: Well pass on to your client
23 that the Board is most interested in knowing the status
24 of --

25 MR. FREIDIN: Oh, and I have and you can

1 rest assured that they have heard that message.

2 MADAM CHAIR: Is this tied in with Mr.
3 Wildman's new initiatives in forestry?

4 MR. FREIDIN: I really don't know.

5 MADAM CHAIR: We'll take our 20-minute
6 break now.

7 ---Recess at 3:05 p.m.

8 ---On resuming at 3:25 p.m.

9 MADAM CHAIR: Please be seated.

10 MR. FREIDIN: Q. Dr. Muller, could you
11 just go back and explain this concept that you referred
12 to about announcing a price for wood that would somehow
13 get used I think through timber management planning at
14 the forest management unit level, and if I've
15 mischaracterized your evidence you can start by telling
16 me that.

17 I just didn't understand that concept,
18 and I'd like to understand that before we move on.

19 DR. MULLER: A. I think the easiest way
20 to explain it is to refer back to the content of a
21 typical first year economics course and I suspect that
22 many of the people in this hearing have had such a
23 course.

24 MR. COSMAN: Assume that for the purposes
25 of the answer.

1 MS. SWENARCHUK: Assume the Board has in
2 your answer.

3 MR. MARTEL: Some thought better of it.

4 DR. MULLER: The way I teach my first
5 year economics course, certainly the first half of my
6 first year economics course, is to explore the idea
7 that prices are determined by the intersection of a
8 supply curve and a demand curve and we always start by
9 saying that there's a downward sloping demand curve and
10 there's an upward sloping supply curve and the two
11 curves intersect at a particular price and quantity.

12 MR. FREIDIN: Q. LS and IM curves?

13 DR. MULLER: A. No, no, that's
14 production possibility frontiers. You've got to be
15 careful.

16 MR. MARTEL: Does that mean what the
17 traffic can absorb?

18 DR. MULLER: Not really.

19 MR. MARTEL: Or is willing to absorb.

20 DR. MULLER: That's a whole subsidiary
21 discussion, but certainly yes, what the traffic is
22 willing to absorb.

23 And what we try to do is we try to say:
24 Well, that's something that is occurring at the level
25 of the overall market. Now, you might think, for

1 example, of a supply curve of newsprint in North
2 America and the demand curve for newsprint and that
3 would determine a price of newsprint and the quantity,
4 a market price and a market quantity.

5 The next thing we do in those first year
6 economics courses is to go back behind the supply curve
7 and we say that conceptually the supply curve in the
8 market is built up from the corresponding supply curves
9 of all the individual producers of a product, for
10 example, all the individual firms producing newsprint,
11 or I'm going to extend my analogy to all the individual
12 forest management units in the province.

13 And conceptually you derive that curve by
14 saying, suppose you told the managers of a firm that
15 the price of the product they were selling was \$500 a
16 tonne, what would be the profit maximizing amount of
17 output that you would produce, and they would give you
18 an answer and you would add up all those answers from
19 all the firms and the entire industry and you would get
20 a total amount of newsprint that would be produced
21 voluntarily in the newsprint industry if the price were
22 \$500 a tonne.

23 And you could do that for any price that
24 you wanted to do it, you could do it for \$300 a tonne
25 and \$700 a tonne and, as a result of that process, you

1 could build up a picture of a market supply curve which
2 told you how much output would be produced in the
3 entire market at any particular price.

4 Now, suppose you then announce that the
5 price of newsprint is \$450 a tonne, you don't have to
6 tell each individual firm how much newsprint to
7 produce, each individual newsprint firm will produce
8 the amount of output that they told you before would
9 maximize their profits given that the price was \$450,
10 and when you added up all of those quantities you would
11 get the quantity that you originally expected.

12 So there's consistency between the
13 decisions of the individual firm and the market as a
14 whole even though you haven't ordered individual firms
15 to produce a particular amount of output. And, of
16 course, the way the analysis goes on in first year is
17 you confront that supply curve with a demand curve, the
18 intersection of those two determines a price and you
19 know that the firms will all produce the same amount of
20 output as is required to fulfill the market's plans at
21 that price.

22 Now, without drawing things out, I was
23 trying to get at a similar idea with respect to wood
24 supply and I think my idea is consistent with Dean
25 Baskerville's idea. Conceptually you could ask at

1 varying prices for wood how much wood could be supplied
2 from the individual forest management units of the
3 province and you could aggregate these up into what
4 would amount to a supply curve for wood for the
5 province as a whole.

6 You could then make a provincial decision
7 on particular grounds - some better grounds than
8 others - but on particular grounds you could choose how
9 much output you wanted to have in the province and
10 announce the price which corresponded to that output,
11 and then you would let your forest managers organize
12 their forests, you would let the forest managers choose
13 the way of producing wood in their forests to maximize
14 what appeared to be their profits given the price of
15 wood that you announce.

16 Now, this would have particular
17 advantages because it would allow individual forest
18 managers a bit more flexibility and, in particular, it
19 would allow individual forest managers to assess
20 whether the value of a bit more wood from their unit
21 exceeded the costs of producing a bit more wood from
22 their unit. That's about as far as I'd like to go,
23 unless you want me to elaborate further.

24 MR. FREIDIN: Q. I just have a couple of
25 questions and I'll probably have some questions for you

1 tomorrow. When you say that there would be an a
2 announcement of the price, are you talking about an
3 announcement of the price being made by government, the
4 government would set the price of wood?

5 DR. MULLER: A. Well, this was hypo --
6 this was -- I was going to say hypothetical. This was
7 a comment designed to illustrate the idea that you can
8 have consistency between provincial goals and local
9 management decisions without necessarily ordering each
10 unit to produce a specified quantity of wood.

11 And the purposes -- I wasn't saying that
12 we should proceed by announcing a central price of
13 wood, I would prefer to see us proceed by taking the
14 price of wood that's more or less determined in markets
15 and applying that at the provincial level -- at the
16 local level.

17 But what I was addressing the comment at
18 was the presumption that in order to have consistency
19 between provincial plans and local unit operations we
20 had to be in the position of constraining tightly the
21 quantity of wood that's supplied in each of those
22 units, and I don't think that is that's the case.

23 MADAM CHAIR: Excuse me, Dr. Muller. I
24 can see why mill utilization would be price sensitive,
25 but I can't see how that addresses the supply argument

1 that you have to identify future supply, because it's
2 being produced no matter what you do. We're not
3 talking about the beverage industry, we're talking
4 about a resource industry where the future of supply
5 and where it's being grown or where it might show up is
6 a separate issue from how price sensitive mill
7 utilization is.

8 DR. MULLER: Well, I think the principle
9 that you can get more supply for a higher price stands
10 and the principle that a higher price will encourage
11 mills to economize on wood and use it wisely stands.

12 I'm not sure that -- I'm not sure how far
13 down the road I would go of saying that the utilization
14 decision is completely separate from the supply
15 decision.

16 MR. MARTEL: Well, I just wonder how one
17 arrives at this. It sounds like price fixing, almost
18 the way we did uranium 20 years ago and doesn't reflect
19 the reality of the real world; does it?

20 I mean, some areas you could produce it a
21 lot cheaper than other areas depending on the distance
22 and all the other factors.

23 DR. MULLER: Well, that's why it's
24 important to announce -- that's one of the major
25 advantages of announcing a price, so to speak, whether

1 it's government fixed or whether it's market
2 determined, the point is that there are areas which
3 will produce wood more cheaply and there are areas on
4 which it is very expensive to produce wood and you
5 would like to see your wood production concentrated in
6 areas in which it's relatively cheap to produce wood
7 and you would like to see your areas of the province
8 where timber production is quite expensive, you would
9 like to see those areas reserved for non-timber uses.

10 One of the big values of conducting an
11 accounting exercise is to help you make that decision.

12 MR. FREIDIN: Q. If you're doing this
13 particular exercise and --

14 MR. MARTEL: Hang on, before you just go
15 on, because there's still -- because in fact you still
16 have the problem of the target that was set and how
17 much bearing does that have on costs?

18 I mean, you set a target, you might be
19 able to produce some cheaper here, but if you've got a
20 provincial target, what does that do to your theory
21 then that we have to produce so much?

22 And cost isn't just the bottom line then;
23 is it, or it just isn't cost that's the bottom line,
24 it's more than cost, it's what you've decided as a
25 society through your government what the production

1 policy will be.

2 DR. MORRISON: Perhaps I can address that
3 point. It seems there is two basic ways that society
4 or provincial government could make a decision about
5 what production is going to be from the forest. They
6 could either set the price or they can set the
7 quantity.

8 What Dr. Muller has been suggesting has
9 been a process of setting a price and allowing managers
10 of individual forest management units to make decisions
11 about where they're going to draw on the wood, how
12 they're going to produce wood in the most cost
13 effective or with a goal of maximizing net social
14 benefits, and how they're going to -- or what the
15 amount is that they're going to supply at that given
16 price.

17 One of the advantages of considering it
18 from a price point of view is that if in fact that
19 price that you need to specify, that you need to set at
20 a provincial level for a given quantity in order to get
21 a given quantity of wood is different, say greater than
22 the market price, then that indicates that you are in
23 fact paying a cost to carry on forestry in the province
24 and you can attach a number to that cost and you can
25 have that enter into what presumably will be your next

1 round of forest production policy analysis.

2 MR. FREIDIN: Q. Dr. Muller, when you've
3 got this price that's set, which is the cost that has
4 been charged for the wood, you say it will end up that
5 companies will indicate how much supply they're willing
6 to in fact produce at that price, but if we're talking
7 about an undertaking which is the management of a
8 renewable resource which we want to be there a hundred
9 years from now or the next rotation after that, 200
10 years from now, then doesn't the unknown price of wood
11 in the future come into place?

12 DR. MULLER: A. Yes, the unknown price
13 of wood is important in determining what the expected
14 future value of the wood is.

15 Q. Very difficult, would you agree, to
16 predict the price of wood 70 years into the future?

17 A. Very difficult to predict it
18 accurately.

19 Q. Right. I'm going to leave it there
20 and I'm going to come back to that tomorrow. Just one
21 last question before I get off this topic.

22 Is the fact that the price at which you
23 can sell wood products can fluctuate dramatically as we
24 have heard through the evidence of all the parties,
25 does that have any relevance to the use of this

1 approach?

2 A. I think it has relevance, yes.

3 Q. How?

4 A. The approach I sketched out presumed
5 that we could make a calculation about the net present
6 value of the wood to be harvested on an FMU on the
7 basis of the present price.

8 If the price fluctuates widely or wildly
9 it would be unwise to make a decision based only on
10 one-spot observation, presumably you would want to make
11 your decision on a better estimate of the current price
12 than the estimate you would get by making just one
13 observation.

14 So that to begin with, if there's a lot
15 of variation in the price right now, I would want to go
16 to some effort to take an average price that was
17 averaged over a reasonable period of time.

18 Q. Okay. I'll wait until class No. 2.
19 Could we just move on, and I have a number of
20 miscellaneous questions which I think will take us the
21 rest of the afternoon.

22 Dr. Morrison, could you turn to Exhibit
23 1696, overhead No. 32.

24 DR. MORRISON: A. 32?

25 Q. 1692, I'm sorry.

1 A. Sorry.

2 MADAM CHAIR: 1696, Mr. Freidin?

3 DR. MORRISON: 1696, page 32?

4 MR. FREIDIN: Q. Well, I may have it
5 wrong. I've got Exhibit 1692, is what Mr. Thornton's
6 got. It's the survey where you -- Public Attitude
7 Towards Management of Forest Resources.

8 DR. MORRISON: A. That's page 32 in
9 Exhibit 1696.

10 Q. 1696. That's the one where Item No.
11 4, the question was -- the proposition was the forests
12 should not be exploited economically at all, and we had
13 the 48 and 49 per cent for Ontario and Mr. Martel asked
14 a number of questions about that and you said that
15 those numbers, 48 per cent and 49 could be interpreted
16 that approximately 50 per cent of the people in Ontario
17 are willing to have the forests turned into a
18 recreational reserve.

19 And to be quite honest that doesn't sound
20 like a very scientific sort of approach to
21 interpretation of this result. Can you please comment?

22 A. Well, that was based on an assumption
23 on my part that people would prefer to use the forests,
24 if they were not being economically exploited, as a
25 recreational resource.

1 Q. If a resource is exploited, sir, does
2 that mean the same thing as the resource is being
3 managed to you?

4 A. Yes.

5 Q. All right. So you think that if that
6 question read: The forests should not be managed for
7 economic purposes at all, that by 48 per cent of the
8 people agreeing that would then -- all right, that
9 would mean that they would perhaps want the forest
10 turned into a recreational reserve?

11 A. Could you repeat the question?

12 Q. All right. If exploited means
13 cutting and walking away, not even caring about
14 regeneration, if that's what exploitation means it has
15 a different meaning than what you attribute it to; does
16 it?

17 A. Okay. I was using the word
18 exploitation in the way that is I guess commonly used
19 in the natural resource economics literature, where you
20 can exploit a fisheries resource, you can exploit a
21 timber resource, you can exploit a mineral resource,
22 which basically means to use it and with that often
23 goes management.

24 Q. So exploit doesn't mean to use it and
25 deplete it then in your jargon?

1 A. In that particular context, no.

2 Q. Okay.

3 A. I'm not sure how it was interpreted
4 in the context of this particular question.

5 Q. We don't know. All right.

6 MADAM CHAIR: Excuse me. Do you think,
7 Dr. Morrison, it meant that you couldn't have a tourist
8 industry or you couldn't have a hunting industry or you
9 couldn't have a commercial fisheries industry?

10 DR. MORRISON: No, no.

11 MADAM CHAIR: You mean the timber
12 industry --

13 DR. MORRISON: That's right, and I would
14 draw that conclusion from the other questions that were
15 asked in the same survey.

16 MR. FREIDIN: Q. So you think that the
17 management of forest resource in this context means the
18 management for timber management purposes?

19 DR. MORRISON: A. Timber management
20 only.

21 Q. Okay. We've heard a lot about what
22 the forest resource management is. Dr. Morrison, Mr.
23 Cosman asked you whether you would agree that
24 downstream forest industry activities are inextricably
25 linked with logging. You said it wasn't inextricably

1 linked because you could have an industry based on
2 recycled paper. Mr. Cosman said completely, Dr.
3 Morrison, and you said no.

4 And are you able, based on your
5 expertise, to provide any evidence regarding the effect
6 that the use of recycled paper could have in the
7 Province of Ontario on the demand for roundwood?

8 A. Well, I would suggest that it doesn't
9 take a great deal of expertise to suggest that if paper
10 is coming from recycled fiber and if there is the same
11 quantity of paper being used that the demand for
12 roundwood would drop.

13 Q. But I'm concerned about significance
14 of that effect, the magnitude of the effect.

15 I took it from your answer to Mr. Cosman
16 that you were suggesting that it could have some
17 significant or substantial effect, and if I interpreted
18 you correctly I wanted to know on what basis you were
19 making that suggestion?

20 First of all, did I interpret you
21 correctly?

22 A. Yes, I think it could have a
23 significant effect.

24 Q. All right. On what basis do you make
25 that comment?

1 A. Well, what I would point to is the
2 dominance of newsprint as a product from Ontario
3 forests and I would point to the percentage recycled
4 requirements in various states for newsprint and
5 newspaper.

6 Q. Dr. Morrison, what's your expertise
7 that allows you to venture an opinion on that?

8 MS. SWENARCHUK: You asked him the
9 question, Mr. Freidin, he's responding to the question.

10 MR. FREIDIN: Well, I know, I know, but
11 he responded to it and he could have responded, I don't
12 have the expertise to answer that question.

13 Q. You answered the question, and I take
14 it that you feel that you have enough expertise to
15 answer it, and I want to know on what basis you feel
16 that you have expertise to make such a statement?

17 DR. MORRISON: A. Well, newsprint -- I
18 mean, I can point you to the statistics that show that
19 newsprint is an important product from Ontario forests,
20 and with a bit of time I could point you to the
21 legislation in the United States which requires per
22 cent --

23 Q. We've heard about that legislation in
24 Panel 5 of the Ministry's case, sir. Do you know what
25 Ontario's mill capacity is to use recycled paper; yes

1 or no?

2 A. I don't know the exact figure at the
3 moment.

4 Q. Do you have any information as to
5 whether in fact there would be a supply of recycled
6 paper from the northeastern United States, having
7 regard to the fact that the newspapers in that part of
8 the world are required to in fact use recycled paper to
9 a certain amount?

10 A. You're asking whether there would be
11 recycled newsprint or recycled paper which could come
12 from the northeast U.S. to Ontario mills?

13 Q. Right, which would be available?

14 A. Which would be available. Well, if
15 you look at Exhibit 1699 which is the article from the
16 Globe & Mail, Newsprint Recycling Projects Unveiled, I
17 would assume on that basis that if companies in Canada
18 and the U.S. are planning on expanding their production
19 of -- or expanding the area and their ability to handle
20 recycled paper, recycled fiber, that there is an
21 adequate supply available.

22 Q. There may be an adequate supply
23 available for that particular mill, Dr. Morrison -- I'm
24 sorry, Mr. Cosman?

25 MR. COSMAN: Madam Chair, I'm concerned

1 about this line of enquiry and the witness has not
2 ventured any basis for giving an expert opinion in
3 respect of recycling. There's been a waving around of
4 a Globe & Mail article which we all probably read at
5 the time, but if this witness has done a study of
6 recycled newsprint and it's importance or significance
7 to industry, then that would be the groundwork for any
8 answers that this witness could give, but otherwise
9 we're purely in the area of conjecture based upon Globe
10 & Mail articles.

11 MADAM CHAIR: Mr. Cosman, the Board is
12 well aware of the evidence it has before us about the
13 displacement of virgin fiber by recycling and we were
14 allowing Mr. Freidin to investigate this witness'
15 credibility with respect to giving evidence on that.

16 MR. FREIDIN: Thank you, Madam Chair.

17 Q. Dr. Morrison, I'm going to suggest
18 that an accurate reflection of the evidence of someone
19 who is qualified as an expert in the area, to give
20 evidence on the area of recycling, Mr. John Duncanson
21 in Panel 5 of the Ministry's case gave evidence that if
22 the use of recycled paper increased to the level which
23 was used in Japan - which I think he indicated was the
24 highest level of recycled paper use - occurred, that
25 that would only displace the demand for roundwood in

1 this province by one per cent.

2 Now, if that information is correct I
3 suggest to you that that is an insignificant effect on
4 the demand for roundwood; would you agree, sir?

5 DR. MORRISON: A. If that evidence is
6 correct, I would agree that that's a very small change.

7 Q. And you have no evidence to
8 contradict Mr. Duncanson in terms of his evidence?

9 A. I haven't conducted a detailed study
10 of recycling and the possible impact on newsprint
11 requirements and the substitution with respect to
12 roundwood and this material.

13 Q. But nonetheless you were willing to
14 render an opinion that there would be a significant
15 effect.

16 A. Based on the assumptions that I made,
17 yes.

18 Q. Can you turn to Exhibit 1696,
19 overhead 18, and I'm going to deal with overhead 18 and
20 19. Do you have those, Dr. Morrison?

21 A. Yes, I do.

22 Q. The portion of overhead 18 that I'm
23 going to ask you about is the entry for herbicide
24 spraying under the heading Tending where it indicates
25 that there has been an increase from 1983 to 1987.

1 A. Okay.

2 Q. You made the observation that there
3 had been an increase, and could you perhaps enlighten
4 me as to the point that you were trying to make as a
5 result of that observation?

6 MS. SWENARCHUK: Well, wouldn't it be
7 more fair for Mr. Freidin to put to Dr. Morrison the
8 comment in question then ask for some clarification,
9 rather than asking him to recall evidence given over a
10 week ago with regard to any particular statistic?

11 What's to be gained for the Board by this
12 particular approach to the question?

13 MR. FREIDIN: Madam Chair, this witness
14 referred to it and he just made a note, as my notes
15 indicate, that herbicide spraying has gone up in 1983
16 to '87 particularly on FMAs.

17 What was the point he was trying to make?
18 I mean, he was obviously expecting the Board to come to
19 some conclusion. I don't know what it is and I want to
20 know what it is.

21 MADAM CHAIR: I think that's a fair
22 question, Ms. Swenarchuk.

23 MS. SWENARCHUK: It helps to have the
24 comment.

25 DR. MORRISON: Well, the point I was

1 trying to make, that during this period we have the
2 transition to FMAs and we also have support for
3 herbicide application through a COFDRA agreement in
4 particular and I was trying to make the point that
5 that -- that my understanding of the FMA agreements,
6 plus the support for the herbicide application through
7 the COFDRA has resulted in fact in greater than a
8 hundred per cent increase over that five-year time
9 period.

10 MR. FREIDIN: Q. Are you suggesting in
11 any way that's bad?

12 DR. MORRISON: A. Well, I'm
13 suggesting -- I would at least like to raise the
14 question that if there are environmental costs
15 associated with herbicide use, then those costs may not
16 be properly accounted for.

17 I would also like to raise the point that
18 if there are -- there is a subsidy being provided to
19 support herbicide use, then those costs ought to be
20 brought into a determination of whether a herbicide use
21 is appropriate or not, and that that determination also
22 ought to include those environmental costs.

23 Q. All right. Those particular comments
24 would apply to the application of herbicide regardless
25 of the level; would you agree?

1 A. That's correct.

2 Q. Do you know why that increase in
3 herbicide application occurred?

4 A. My understanding is that it was as a
5 result of treating so-called backlog NSR lands.

6 Q. And could it also have increased as a
7 result of there being more plantations created under
8 the FMA which required tending?

9 A. It could be associated with that as
10 well.

11 Q. And leaving aside for the moment, and
12 accepting for the purposes of my question that the
13 application of chemicals by way of herbicides does not
14 pose unacceptable environmental risk, would you agree
15 that the application of herbicides for the two purposes
16 indicated to deal with NSR lands and to in fact ensure
17 that plantation survival occurs, is in fact a valid
18 reason for applying herbicides and in fact increasing
19 it if in fact you're increasing the number of your
20 plantations?

21 A. Well, I have taken the position in
22 the witness statement and would take the position
23 again, you've asked, that it's a valid reason if by
24 applying the herbicide you're improving the flow of net
25 benefits from the forest.

1 If that analysis is not done, if there is
2 a subsidy for a particular activity being provided,
3 then we may be incurring costs which we as a province,
4 we as taxpayers would choose not to do.

5 Q. Last question before I suggest the
6 break then.

7 A. Mm-hmm.

8 Q. If in fact it was established that
9 you wouldn't have any flow of wood for Industry from a
10 large area of the area of the undertaking without the
11 use of herbicides, what sort of response would you make
12 as to whether in fact you should be permitted to use
13 herbicides?

14 A. Well, that's a very strong
15 assumption, Mr. Freidin.

16 Q. Well, that's the question I'm putting
17 to you.

18 A. Okay. Well, if it were not possible
19 to obtain a flow of wood without use of herbicides, and
20 if you had done the net social benefit analysis and
21 determined that in fact there was a net benefit
22 associated with use of herbicides, including all of the
23 environmental costs, and if that flow of wood was --
24 did consist of a net social benefit or did lead to a
25 net social benefit, then I would think that that would

1 be a good thing.

2 Q. All right. Is that a sort of a
3 policy decision that could be made at the provincial
4 level, Dr. Muller and Dr. Morrison?

5 A. Which, that...

6 Q. That the use of herbicides as a
7 silvicultural tool would be available in order to in
8 fact provide a continuous supply of wood?

9 A. Well, my understanding is that
10 legally and as part of the regulations associated with
11 the Pesticide Act there is a decision made about which
12 pesticides and which herbicides may or may not be used
13 in the province.

14 Q. Let's leave aside the law and the
15 regulation, let's -- just answer the question that I
16 posed to you.

17 A. Well, that would be the basis for my
18 judgment, would be that that there are regulations
19 which determine whether pesticides may or may not be
20 used in the Province of Ontario for forestry purposes.

21 MR. FREIDIN: I've already overrun five
22 minutes. If I want to follow up, I'll do it tomorrow.

23 I will finish I think well before noon
24 tomorrow, Madam Chair.

25 MADAM CHAIR: All right. Ms. Swenarchuk,

1 you'll be following Mr. Freidin.

2 I just remind the parties that we are
3 still meeting at four o' clock tomorrow afternoon with
4 respect to hearing submissions from the parties
5 about --

6 MR. FREIDIN: I intend to have something
7 in a written form for you, Madam Chair. I don't know
8 whether I will have it in advance, but it will not be
9 that long and I will --

10 MADAM CHAIR: We'll be here to listen,
11 Mr. Freidin.

12 Thank you very much. Well, it sounds
13 like you'll be finished by noon tomorrow, gentlemen.

14 And we'll start at nine o'clock tomorrow
15 morning.

16 DR. MORRISON: Thank you.

17 ---Whereupon the hearing was adjourned at 4:05 p.m., to
18 be reconvened on Wednesday, February 13th, 1991,
19 commencing at 9:00 a.m.

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